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Henry Sheafield

THE

CARPENTERS Complete INSTRUCTOR,

IN

Several Hundred DESIGNS,

CONSISTING OF

DOMES, TRUSSED ROOFS, and various CUPOLAS:

WITH

The METHODS of ſecuring them on the ROOFS,

FOR

CHURCHES,	HOUSES, and other
CHAPELS,	BUILDINGS.

SHEWING

The moſt approved Manner of Lighting STAIR-CASES,

With various Sorts of LANTHORNS,

In a New and elegant Taſte,

EXPLAINING

The Manner of Piecing BEAMS, or PLATING, or any Sort of BANDAGE,

FOR

TIMBER SPIRES for CHURCHES, &c.	ANGLE BRACKETS,
TRUSS PARTITIONS,	CORNICES,
FRAMING of FLOORING,	COVING,
TRUSSING of BEAMS,	FORM of GROINS, HIPS, &c.

To which is annexed, a great Variety of

TIMBER BRIDGES,

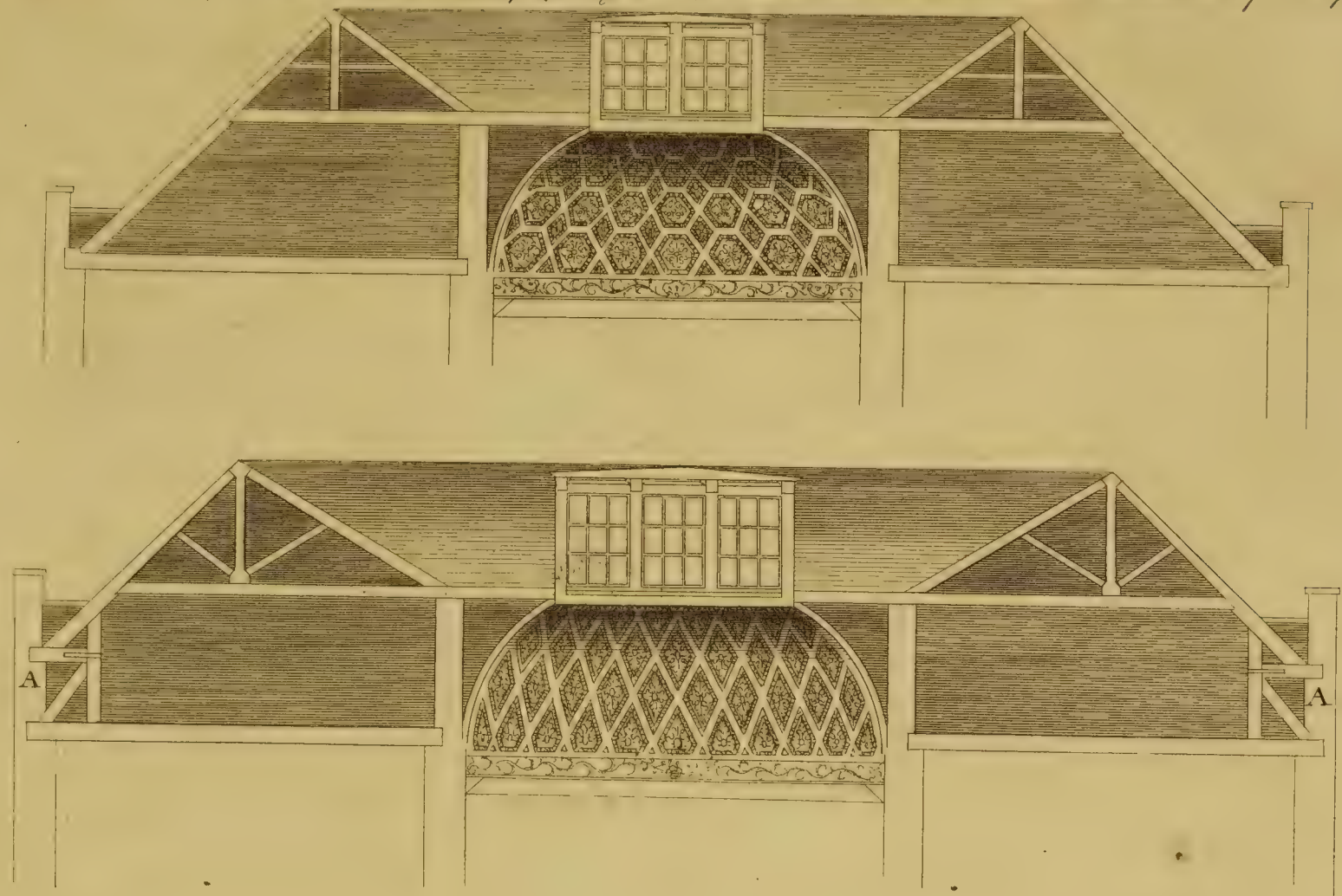
Of various DIMENSIONS.

By ABRAHAM SWAN, Architect.

LONDON:
Printed for ROBERT SAYER, at No. 53, in FLEET-STREET.
MDCCLXVIII.

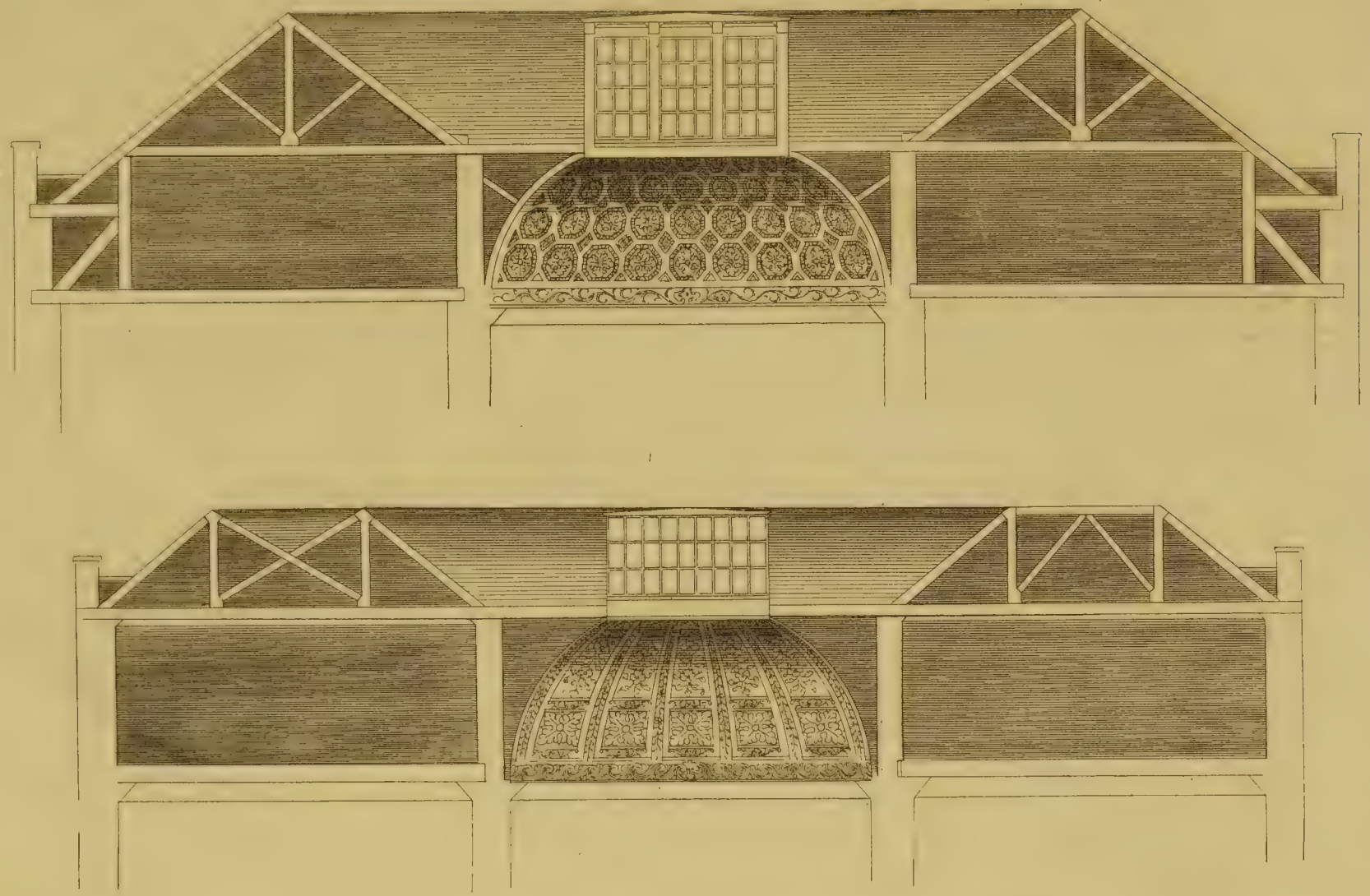
A Section of the Dome of St. Pauls Church, which is designid only to shew the Carpentry Work by P. 1.
which it is supported, which has never yet in any Book been correctly shewn.

2 *different Sections of Roofs, with the manner of lighting the Staircases, the Lower shews how to secure a Half Story at A.*

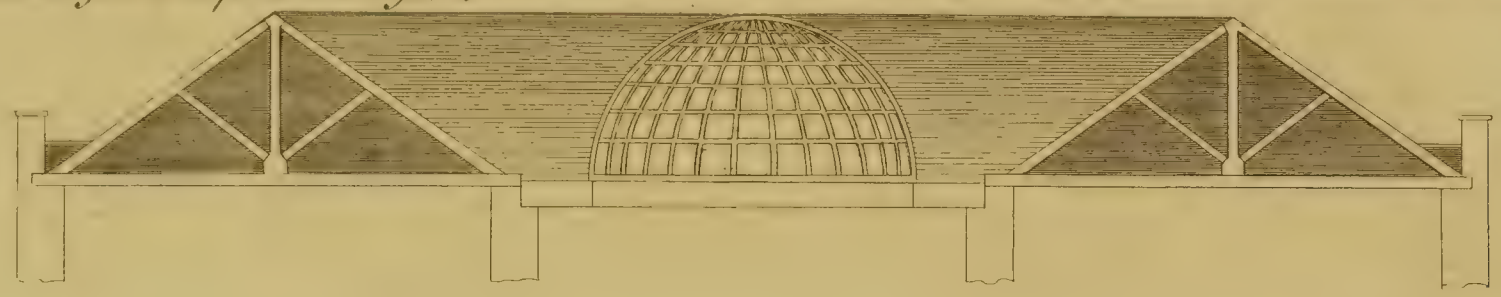


P. 2.

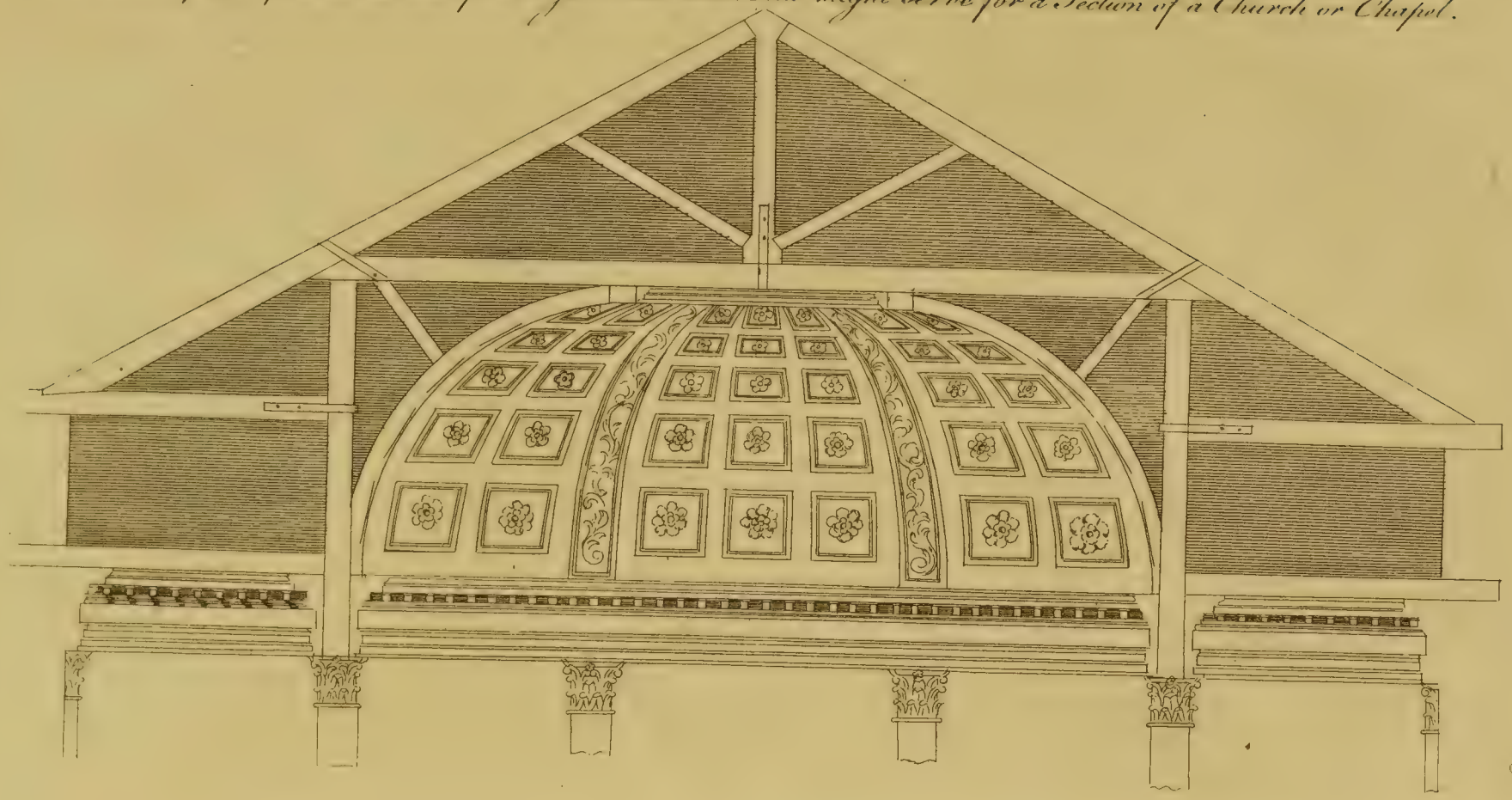
2 Sections of Roofs, with the manner of a Square Lanthorn and Covring to crown the Staircase.



other Sections of Roofs. The upper has no Garrets, the Staircase is lighted by a circular Lanthorn. In the lower is shewn, on the Left Hand, how to light the Garrets from the Inside of the Roof, at A, without any Windows appearing on the Outside. A Method which I have often used with good Success, the Roof well secur'd & good Room for the Guttering at B.

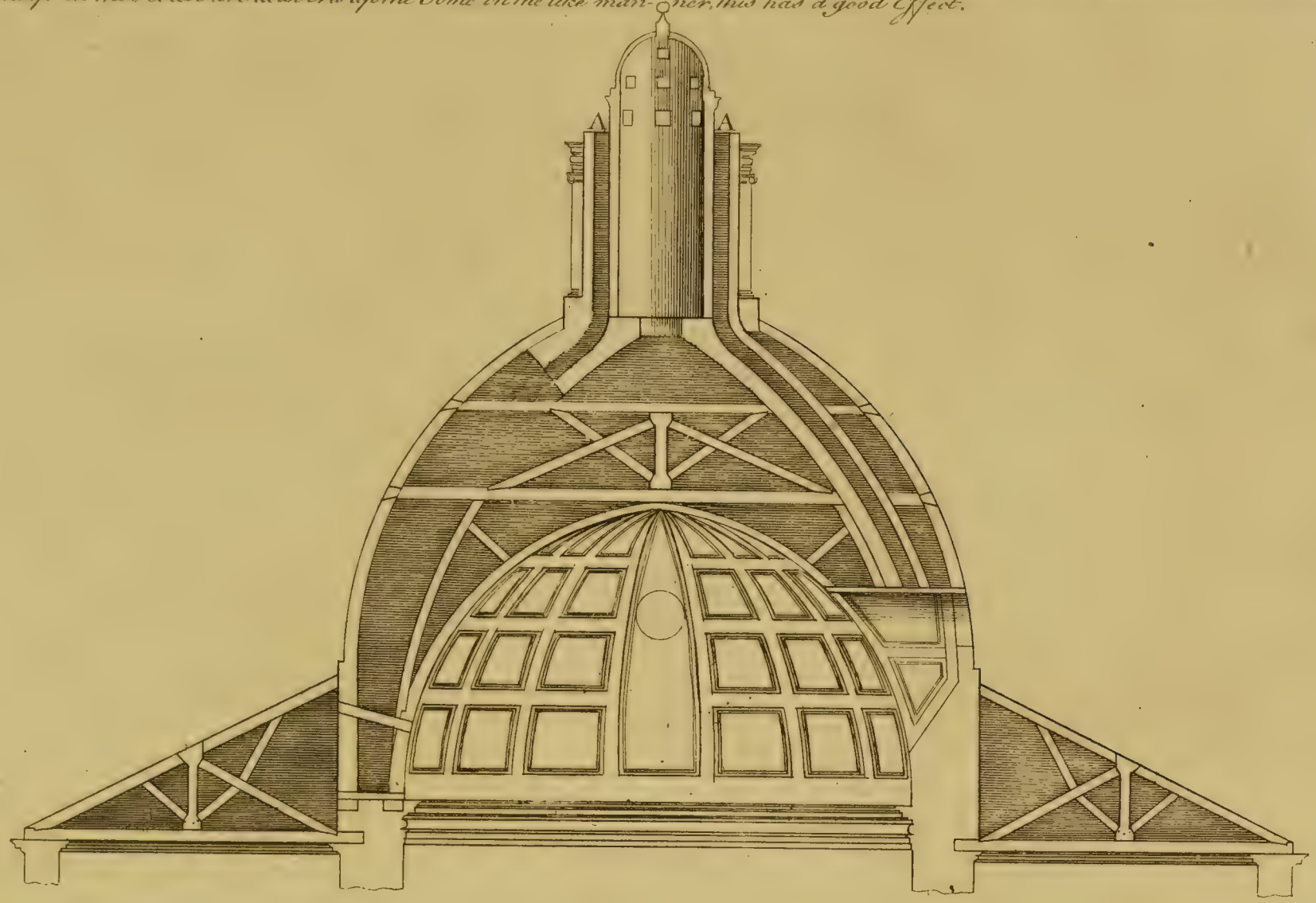


A Section of a Roof, and the End of a large coved Room. This might serve for a Sectum of a Church or Chapel.



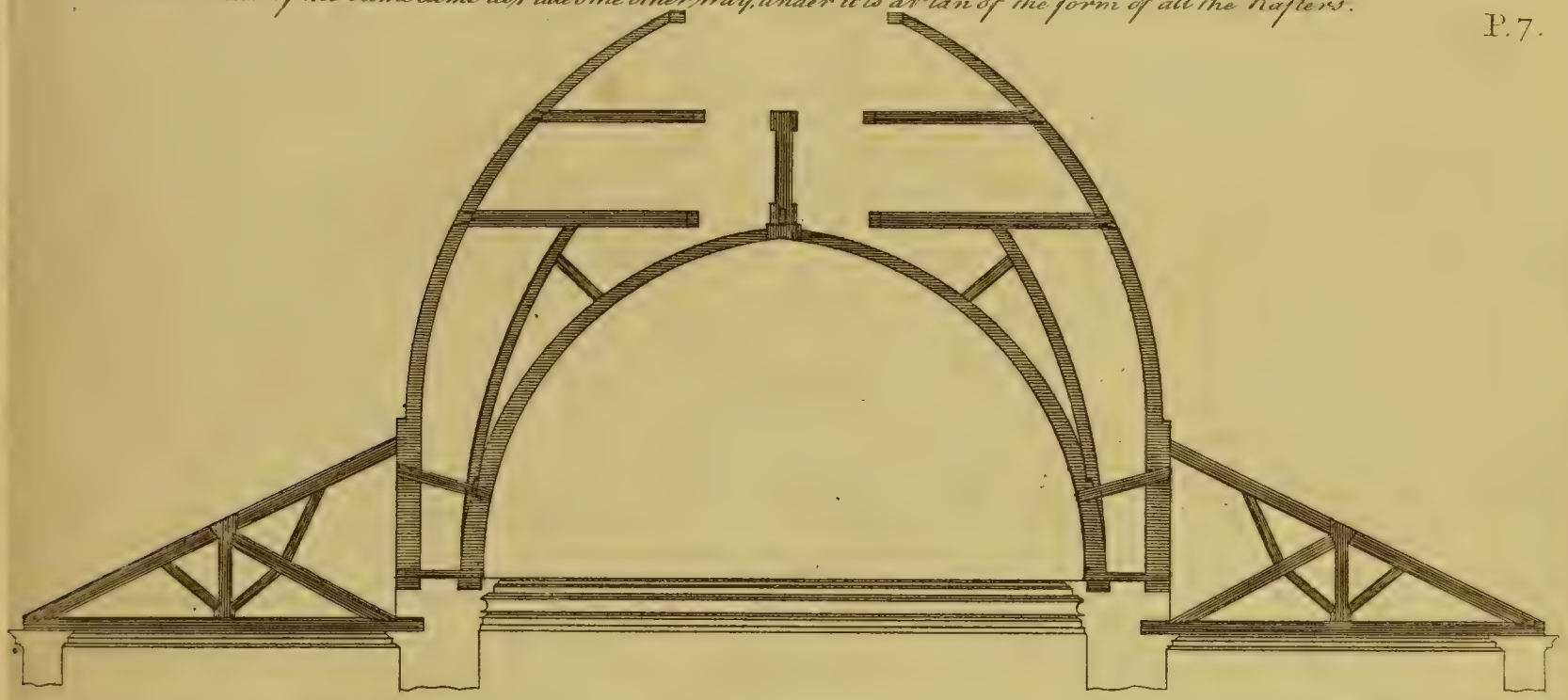
P. 5

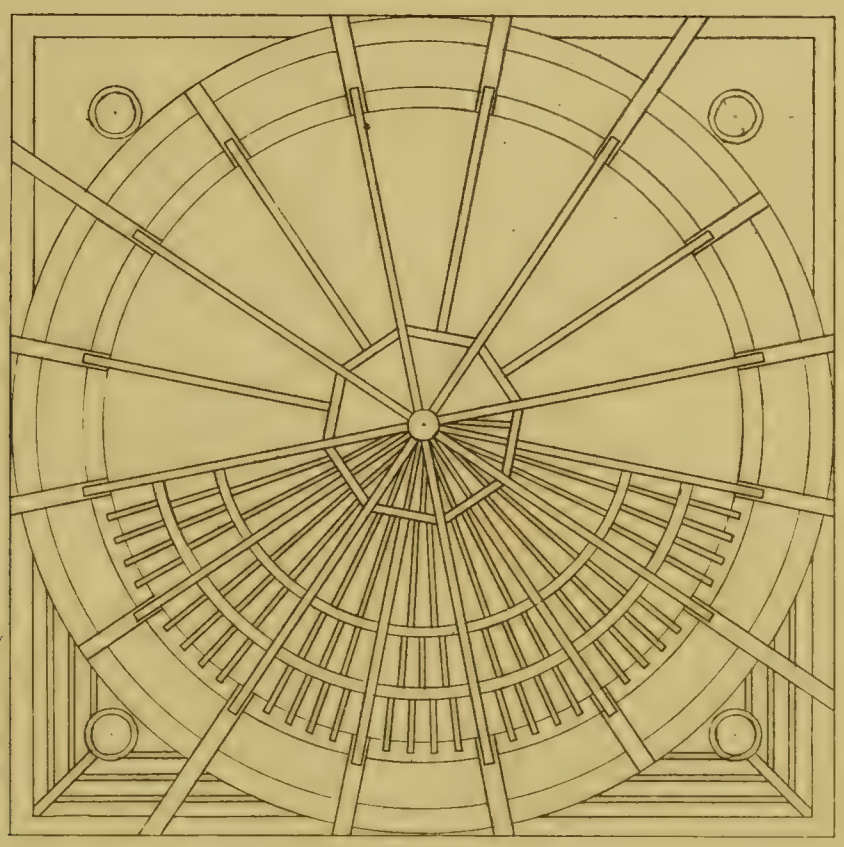
A Section of a dome at Lord Westmorelands House in Kent. the Flues of the Chimnies go up betwixt the Timbers, the Smoak is delivered at Holes of Chimneys in the House are delivered up the Dome in the like manner, this has a good Effect.



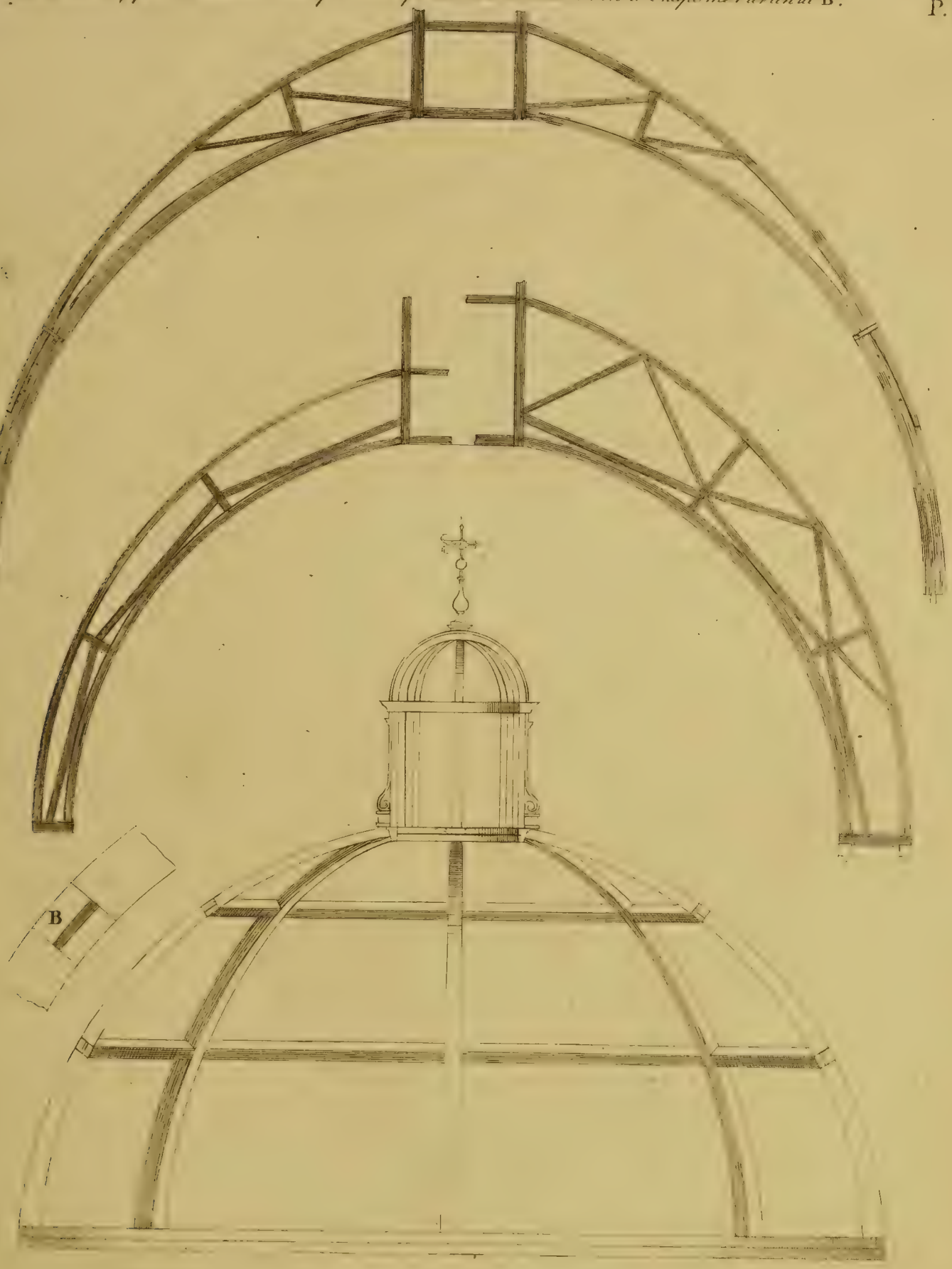
P. 6.

A Section of the same dome as Plate 6 the other Way, under it is a Plan of the form of all the Rafters.

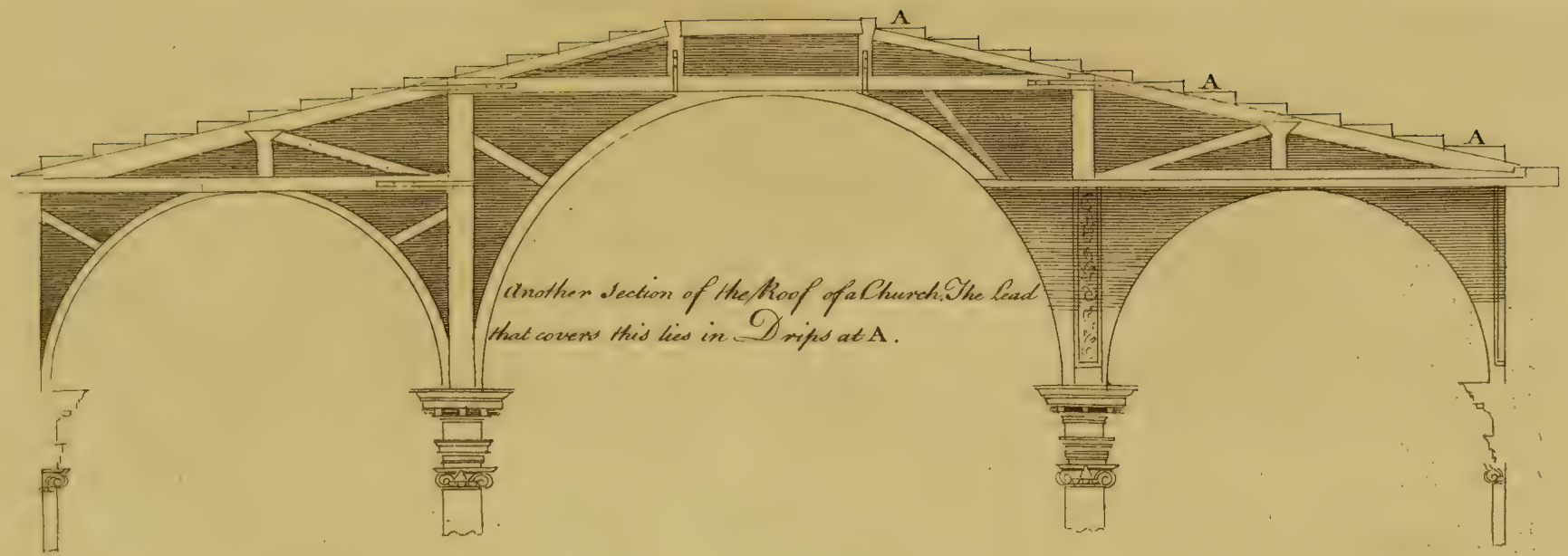




4 different Manners of forming Domes. To the Left Hand of the Lower is shewd how to shape the Purlin at B.



A Section of the Roof of a Church.



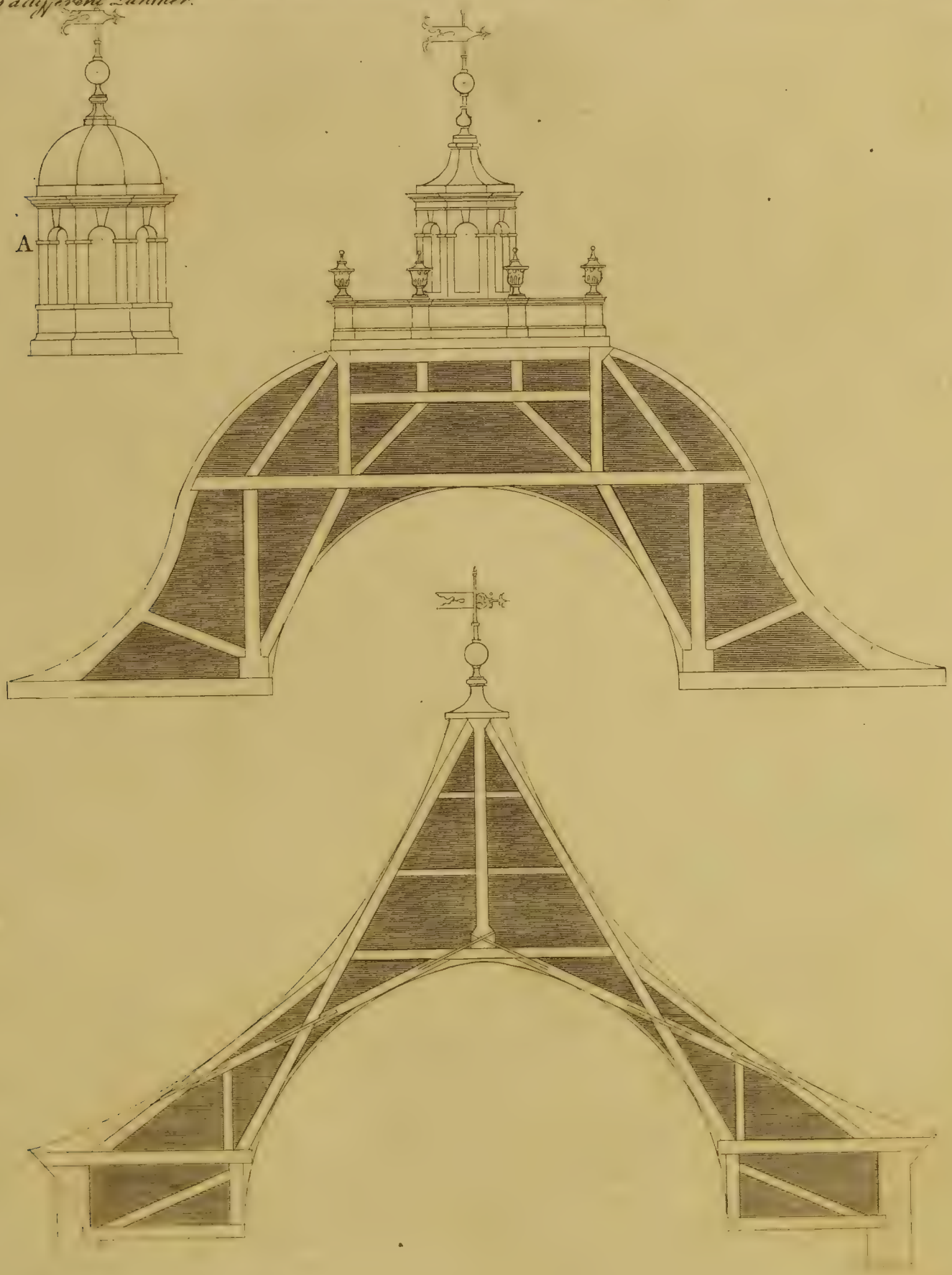
Another Section of the Roof of a Church. The Lead that covers this lies in Drips at A.

P. 10.

Another Section of the Roof of a Church.

P. 11.

2 Sections of Roofs, the Upper is an Ogee, the Lower is curvil. both are supposid to stand on a circular Plan.
At A is a different Lanther.

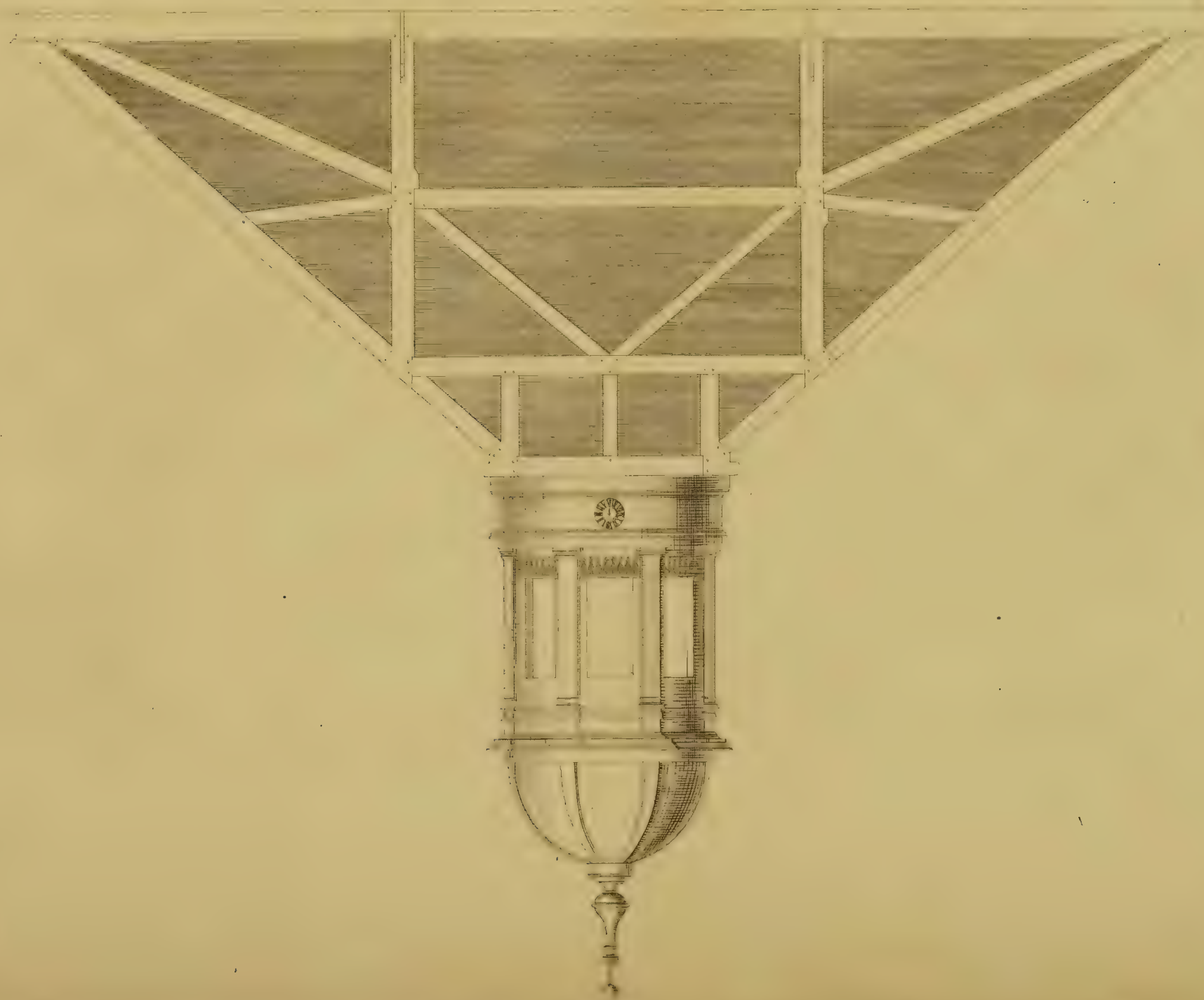


1. Section of a Roof, with a Cupola, with ye manner of Placing the Cupola on ye Roof.

P. 13.

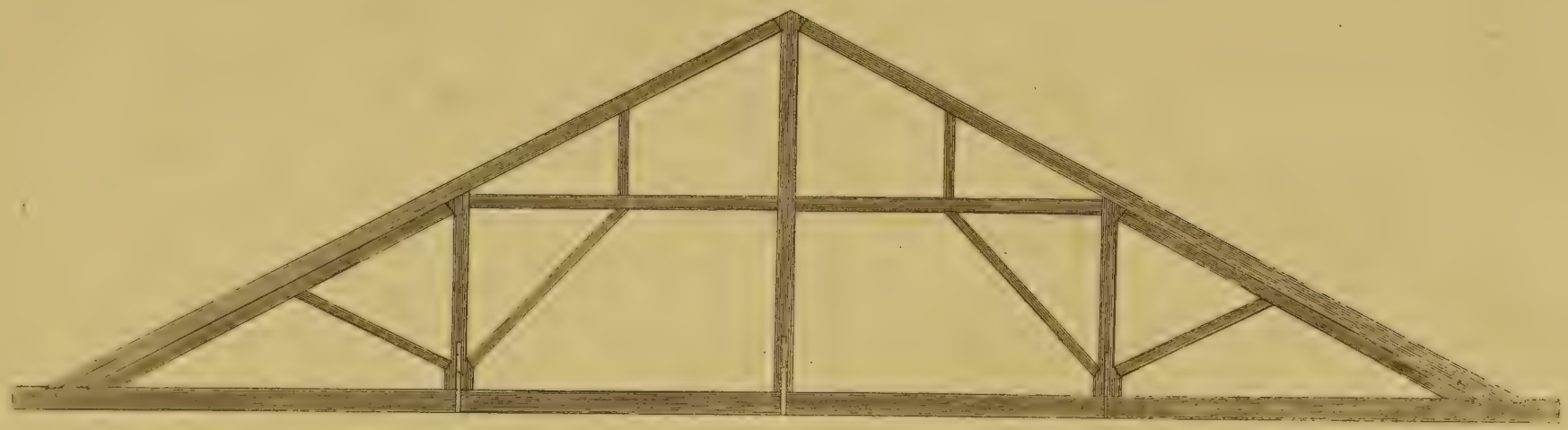
A Section of a Roof, with a different Cupola to that of Plate 13. & form of Covering it upon the Roof being different from & former.

P. 15



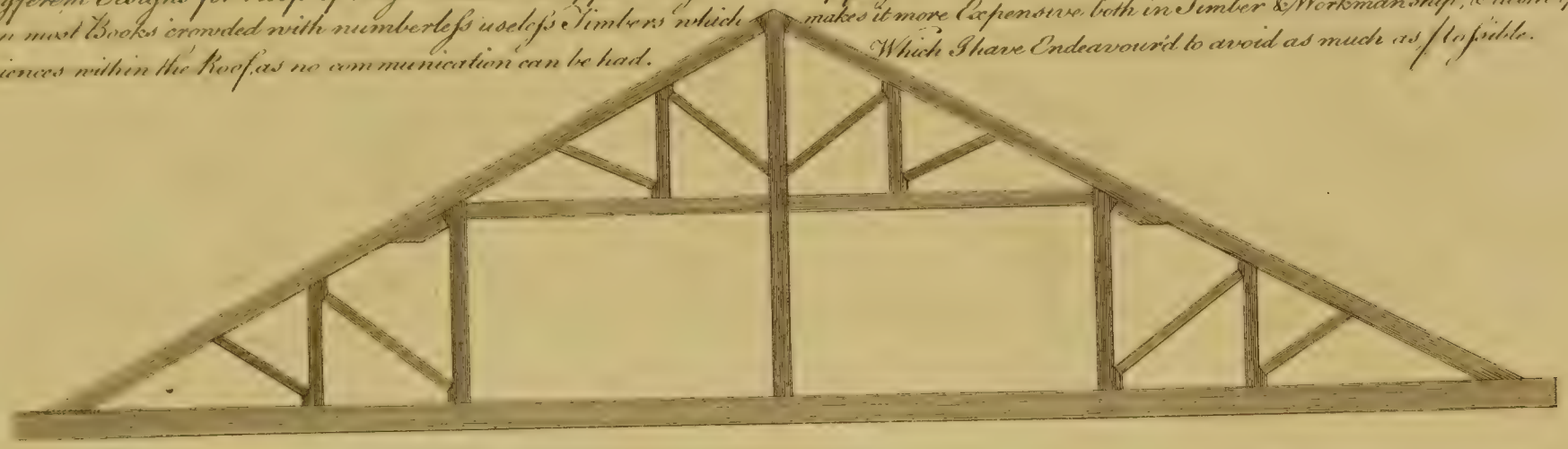
A Section of a Roof, with an Octagon Cupola.

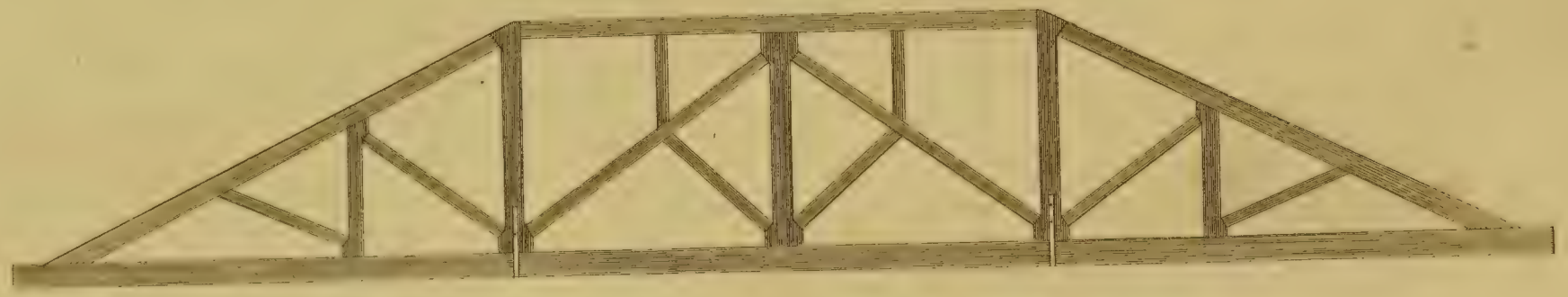
The upper Design in this Plate is a Truss Partition, which will admit of a Door in any part of it, even tho' it should be necessary to take one of the Posts away, the Timbers of the Partition must be according to ye Weight it is obligd to carry.



P. 17.

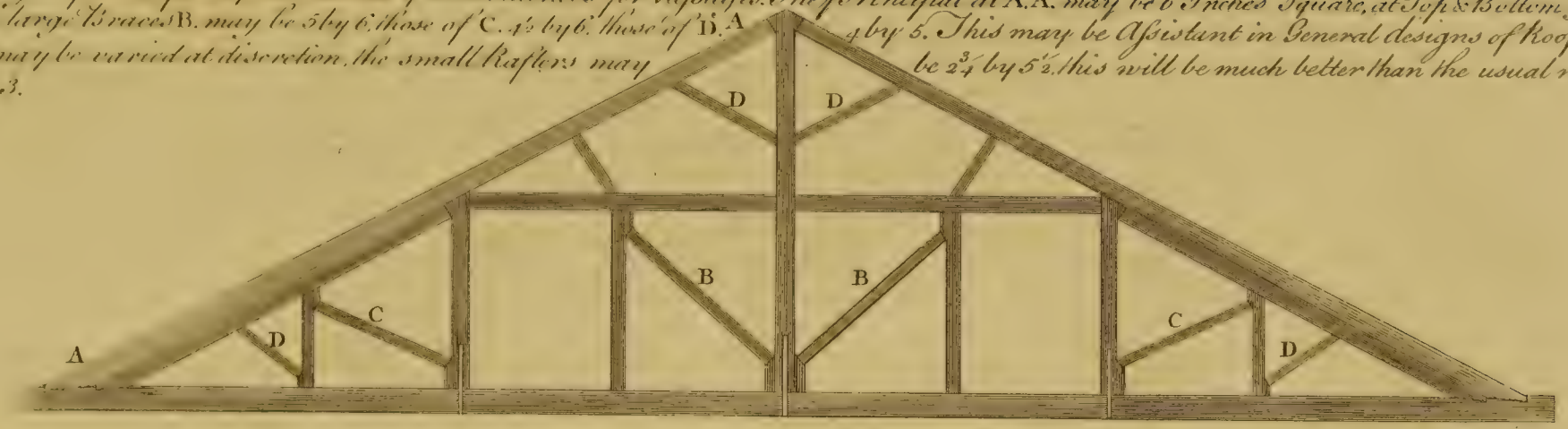
Two different Designs for Roofs of large Extent. The upper design admits of Passages without being interrupted by the Braces. I find the Designs in most Books crowded with numberless useless Timbers which makes it more Expensive both in Timber & Workmanship, & destroys all conveniences within the Roof, as no communication can be had. Which I have Endeavoured to avoid as much as possible.





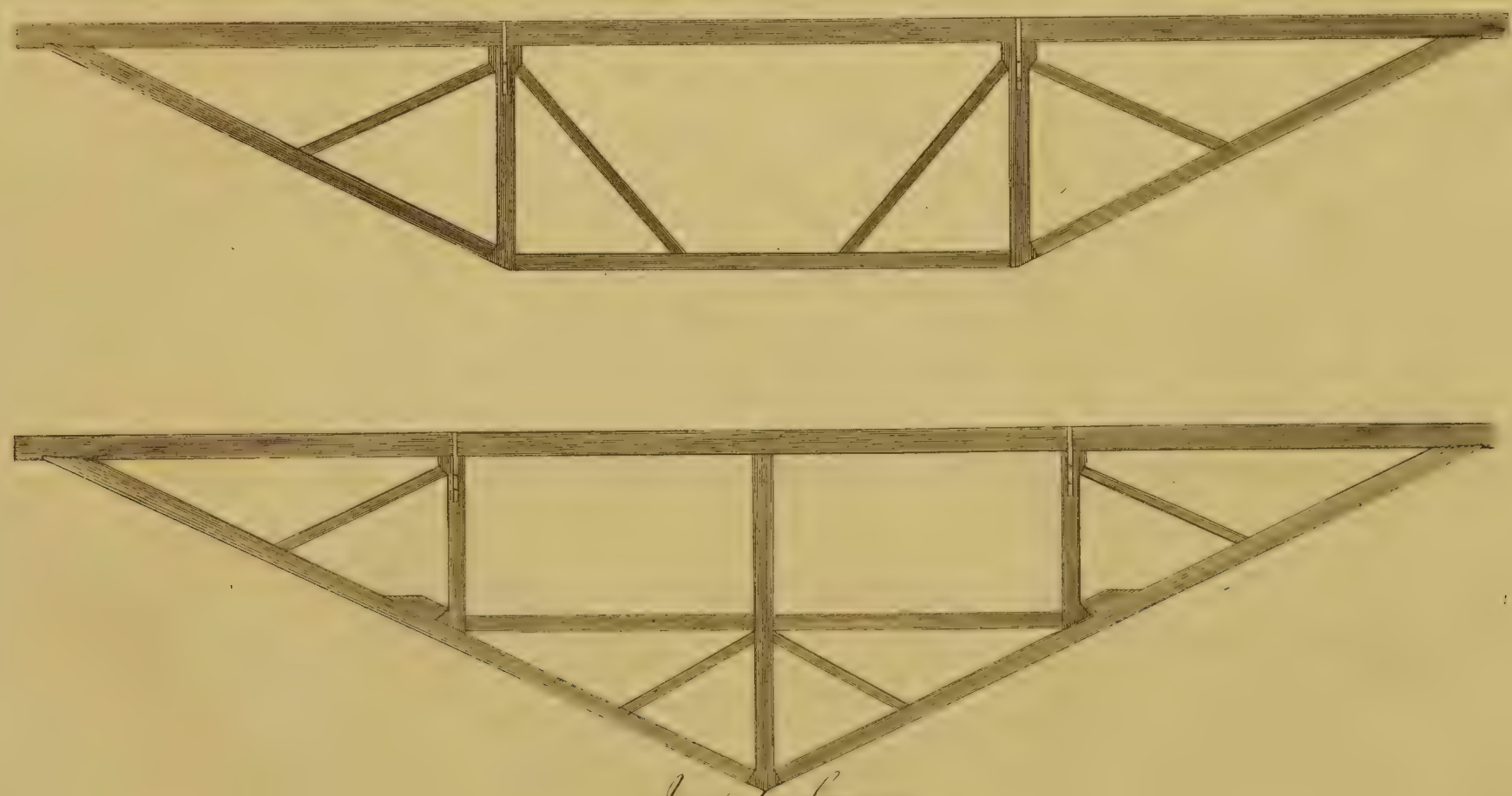
P. 18.

designs for Roofs, they both admit of conveniences for Passages. The Principal at A.A. may be 6 Inches Square, at Top & Bottom 5 by 4 by 5. This may be Assistant in General designs of Roofs, as the large Braces B. may be 5 by 6. those of C. 4½ by 6. those of D. may be 2¾ by 5½. this will be much better than the usual way they may be varied at discretion. the small Rafters may 5 by 3.



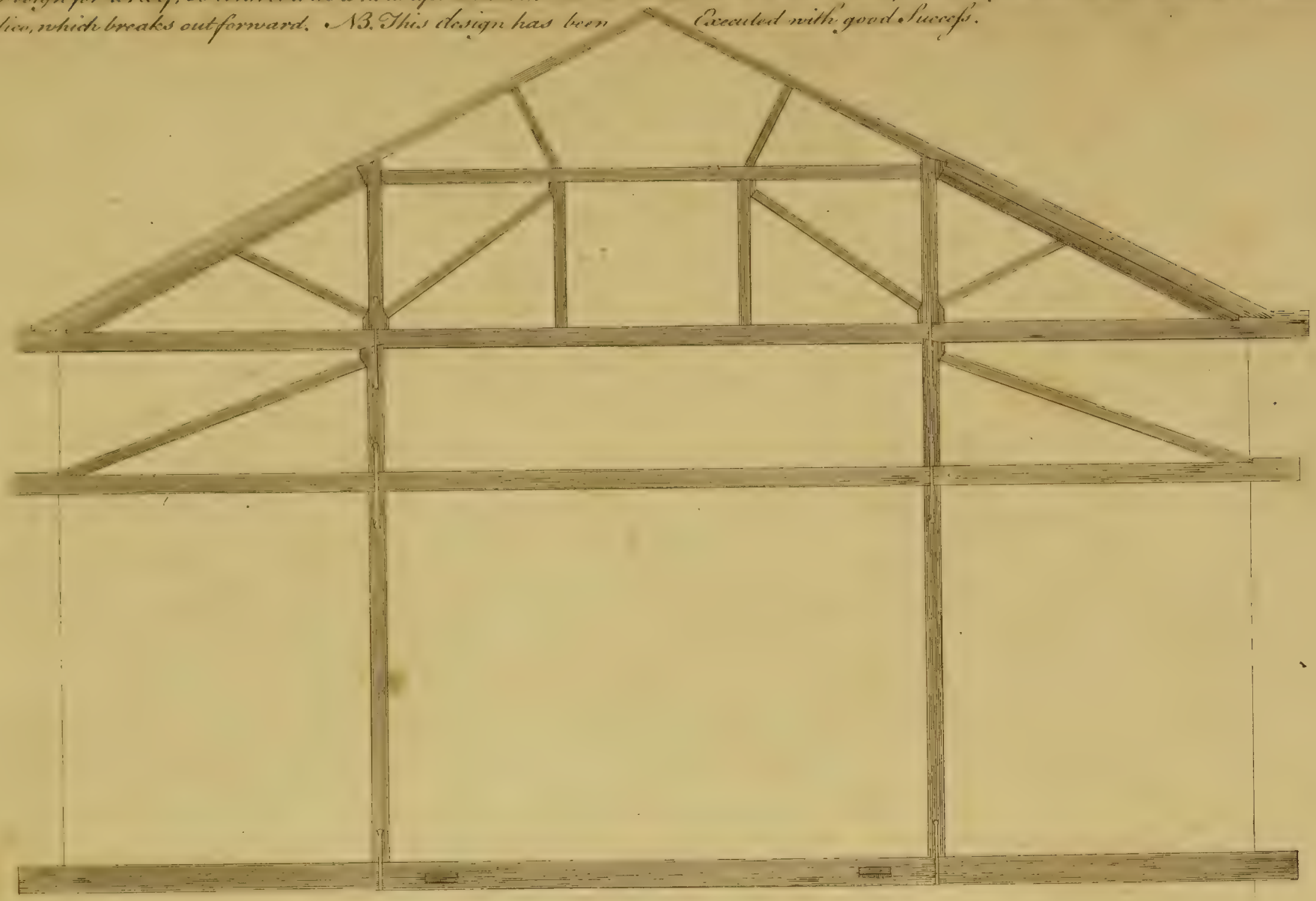
P. 19.

P. 20.



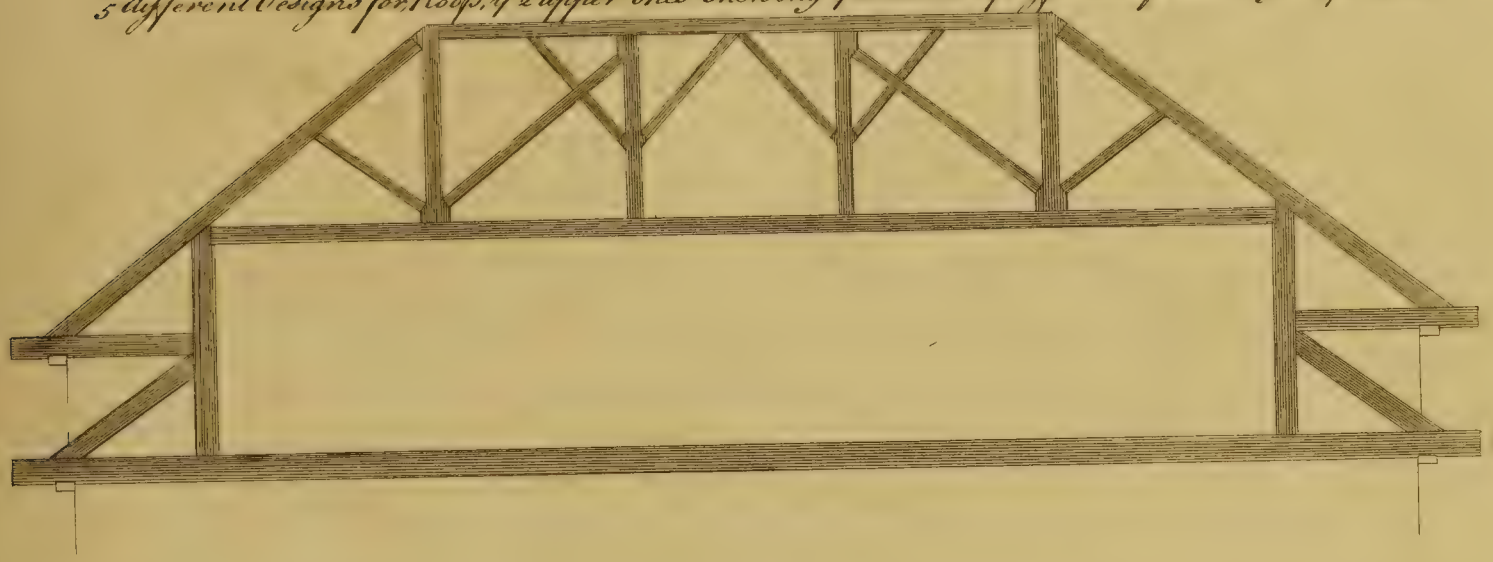
2 Design for Roofs.

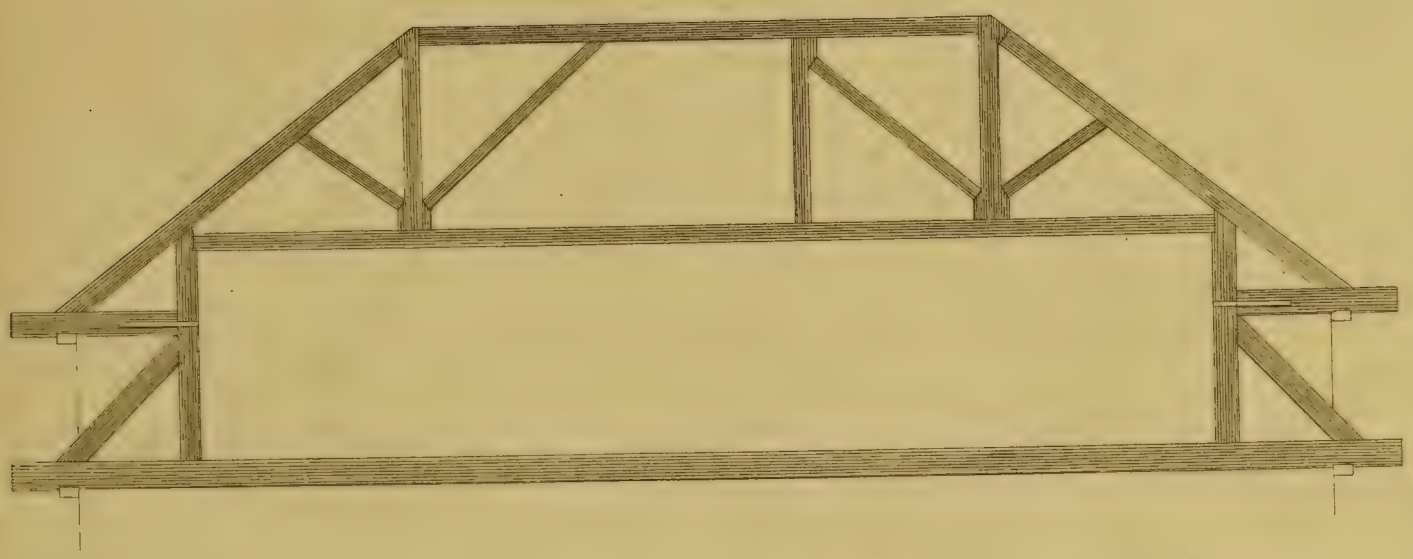
A Design for a Roof, so contrivid as to hold up the lower Beam over a Room 36 Feet wide, if Wall being taken away, in order to Build a Portico, which breaks out forward. NB. This design has been Executed with good Succefs.

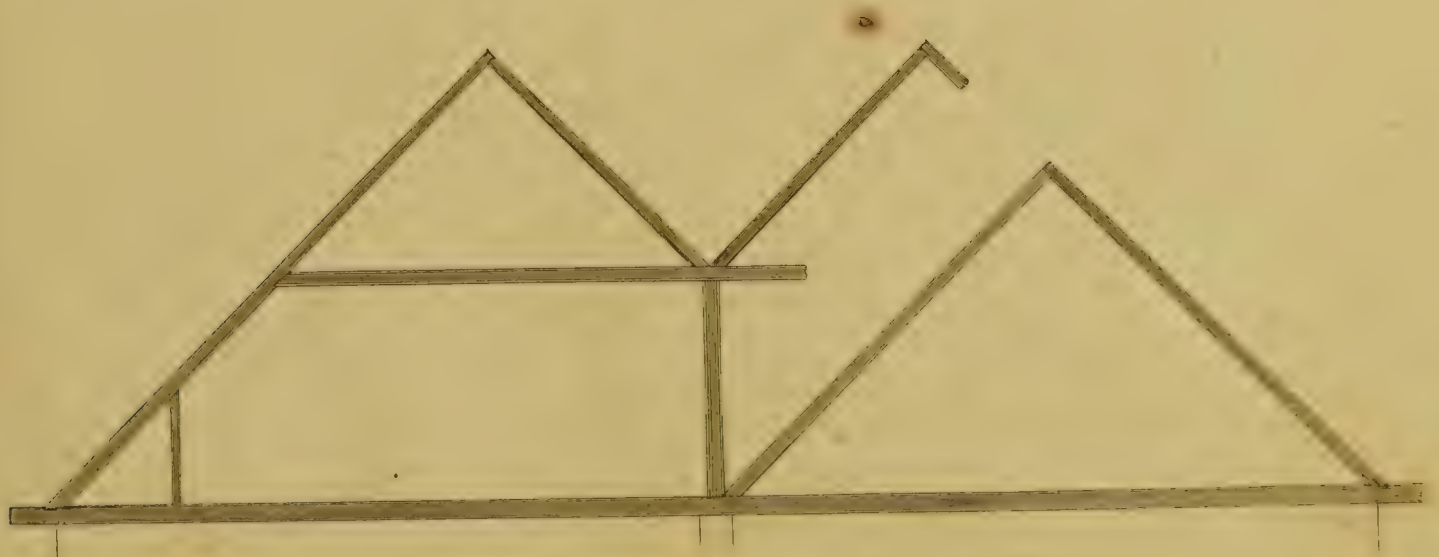


P. 21.

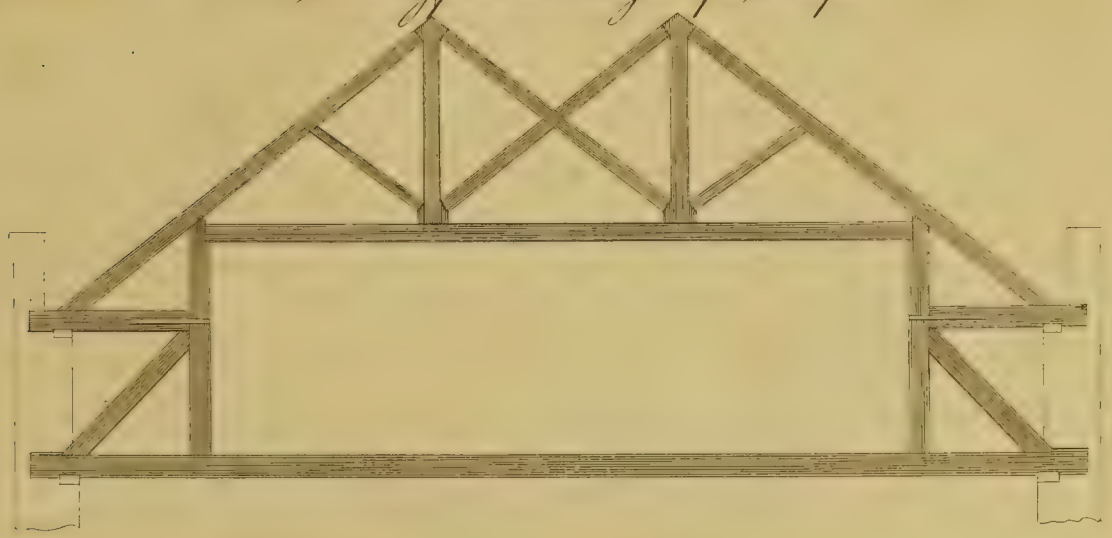
5 different designs for Roofs, ỷ 2 upper ones shewing ỷ manner of Effectually securing Half Storys.

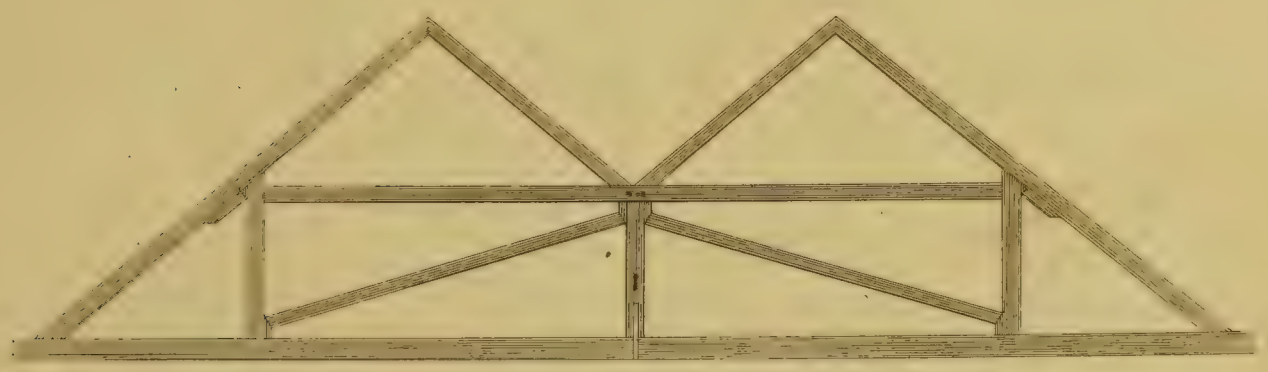


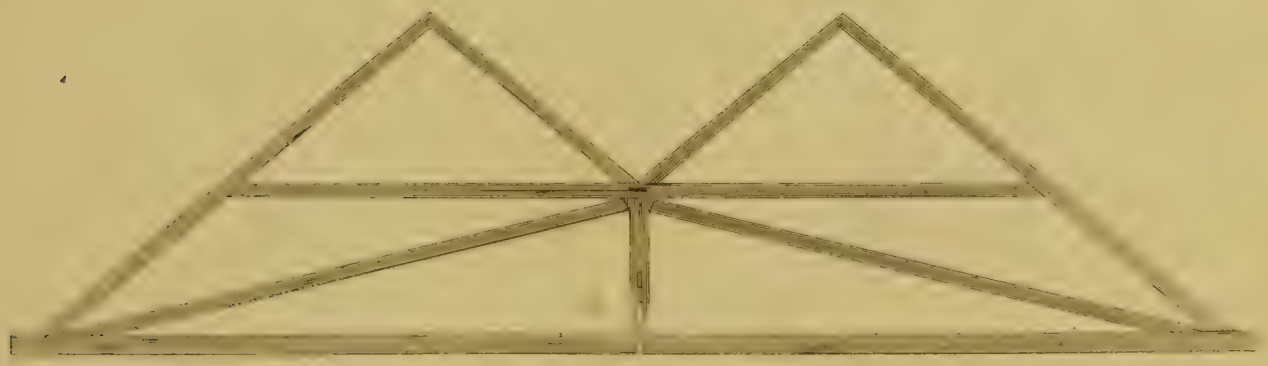




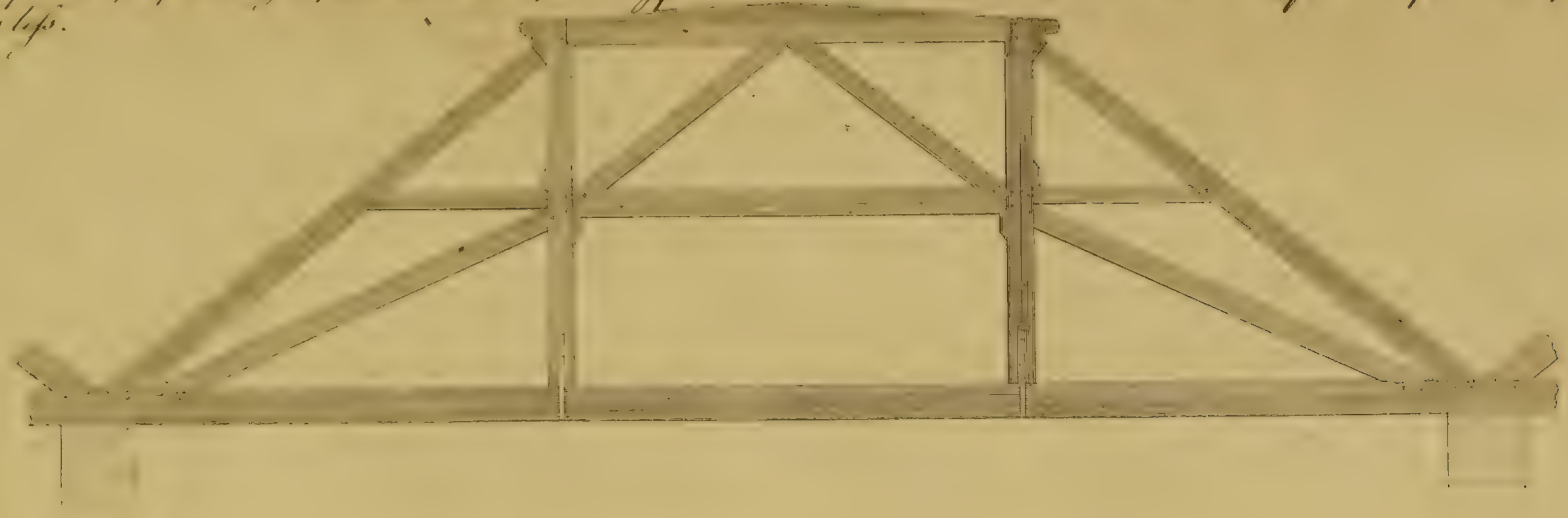
Three different designs for Roofs.

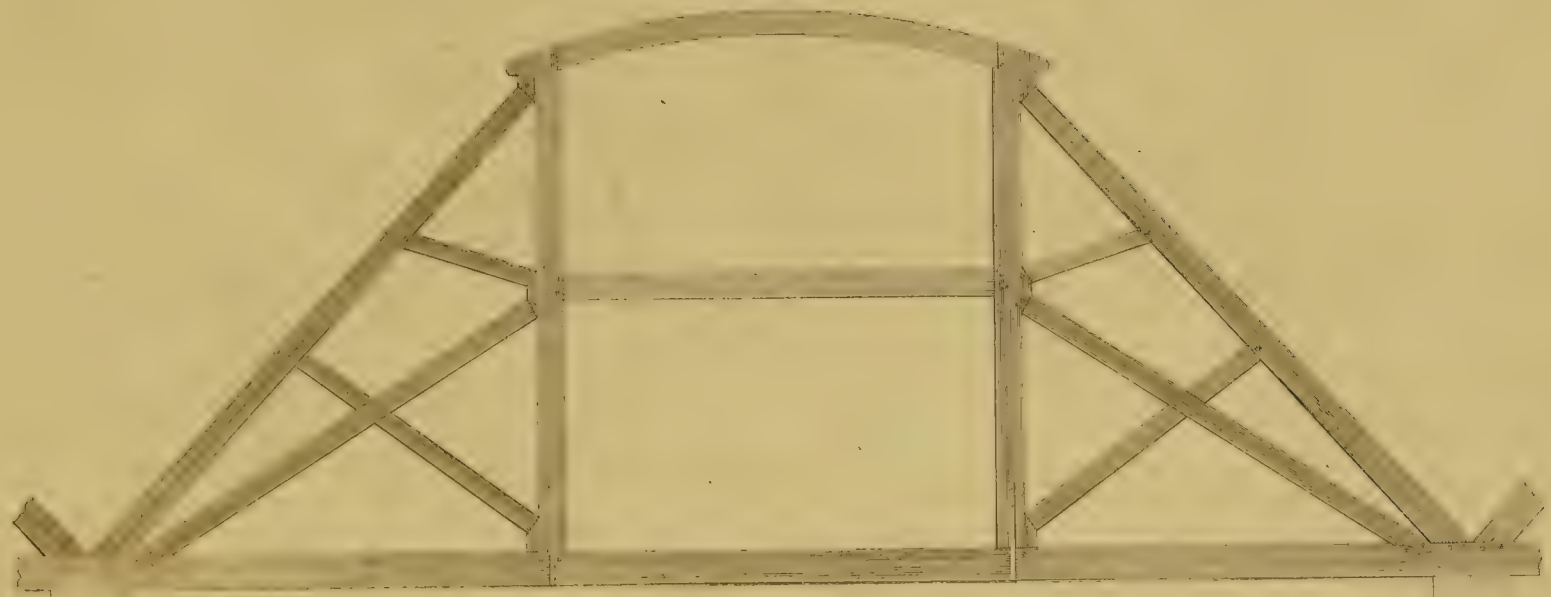




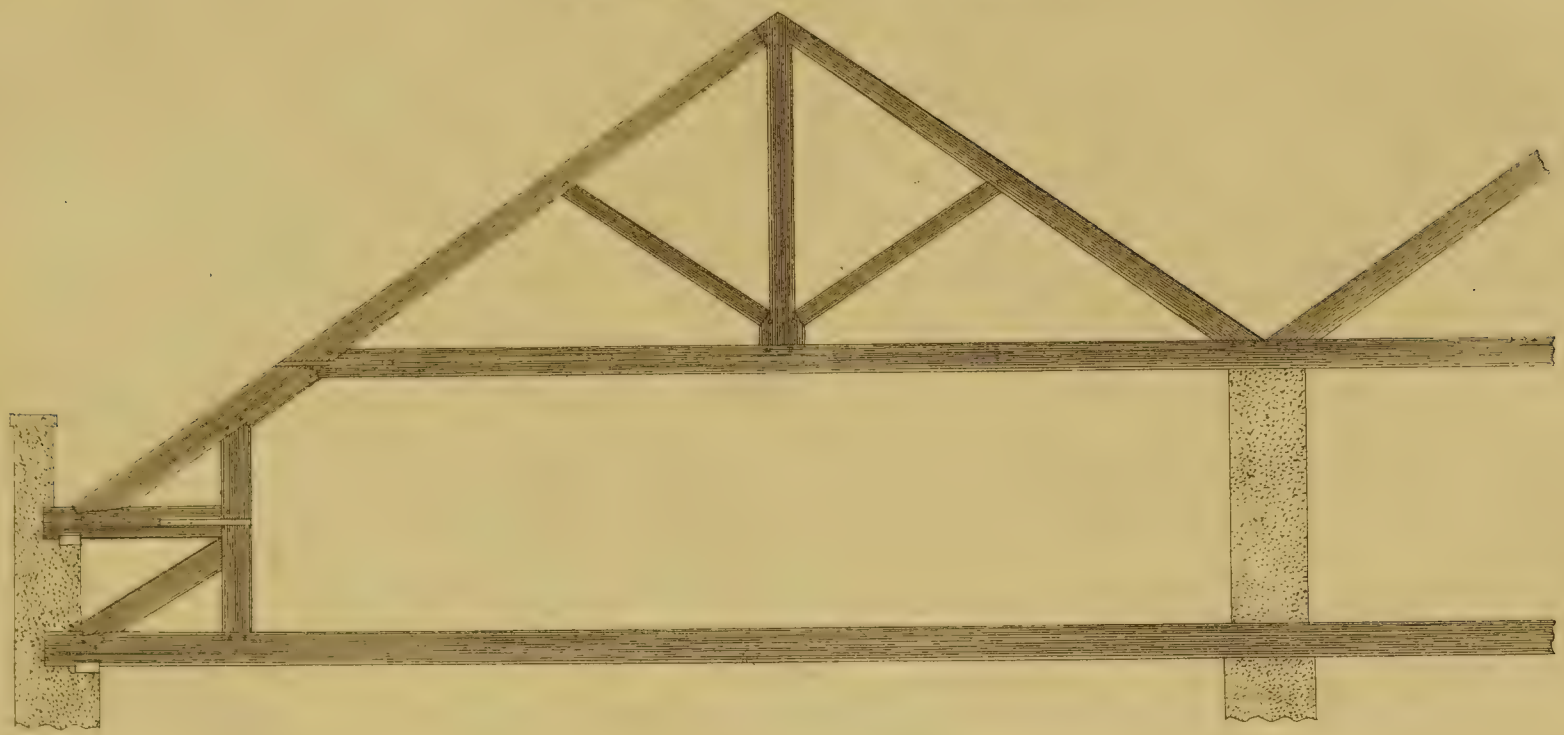


Designs for Roofs of a Large Span, with the Tops cut off, that they may not be higher than other parts of the Roof, when the Span is less.

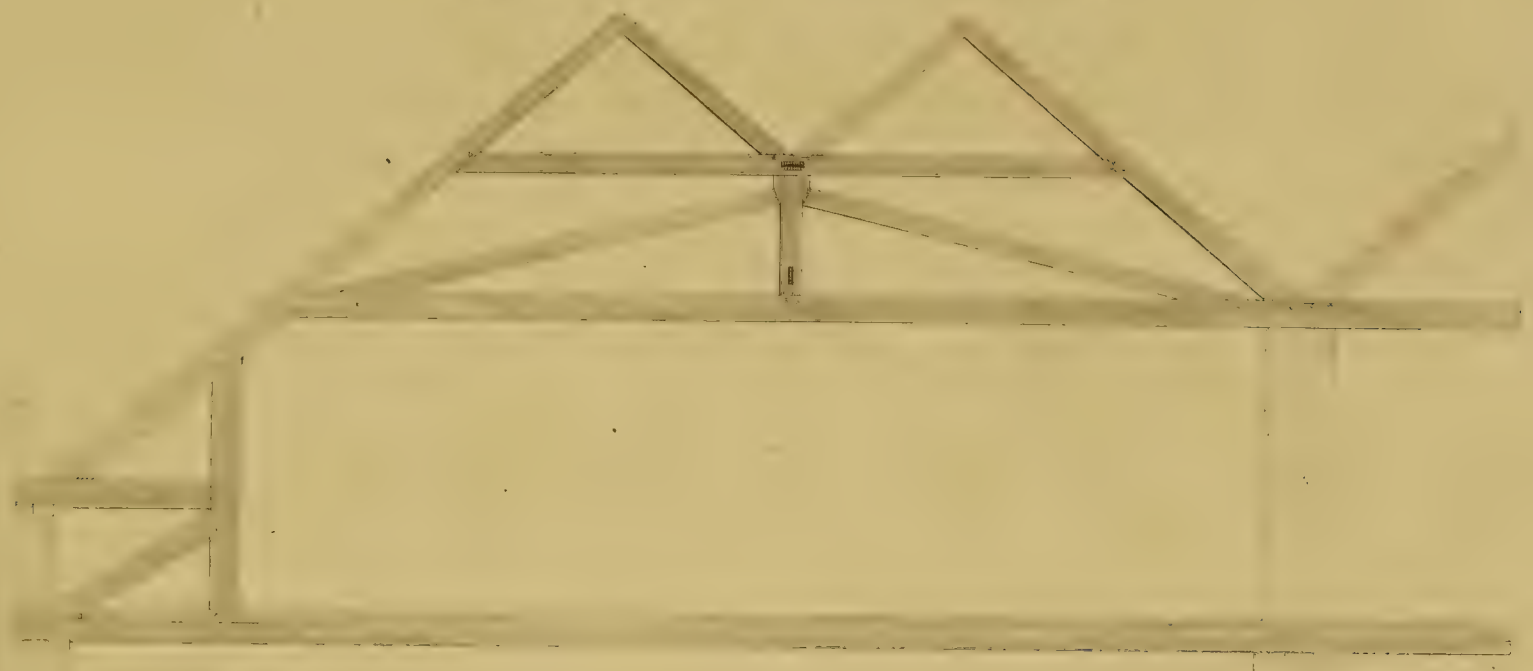




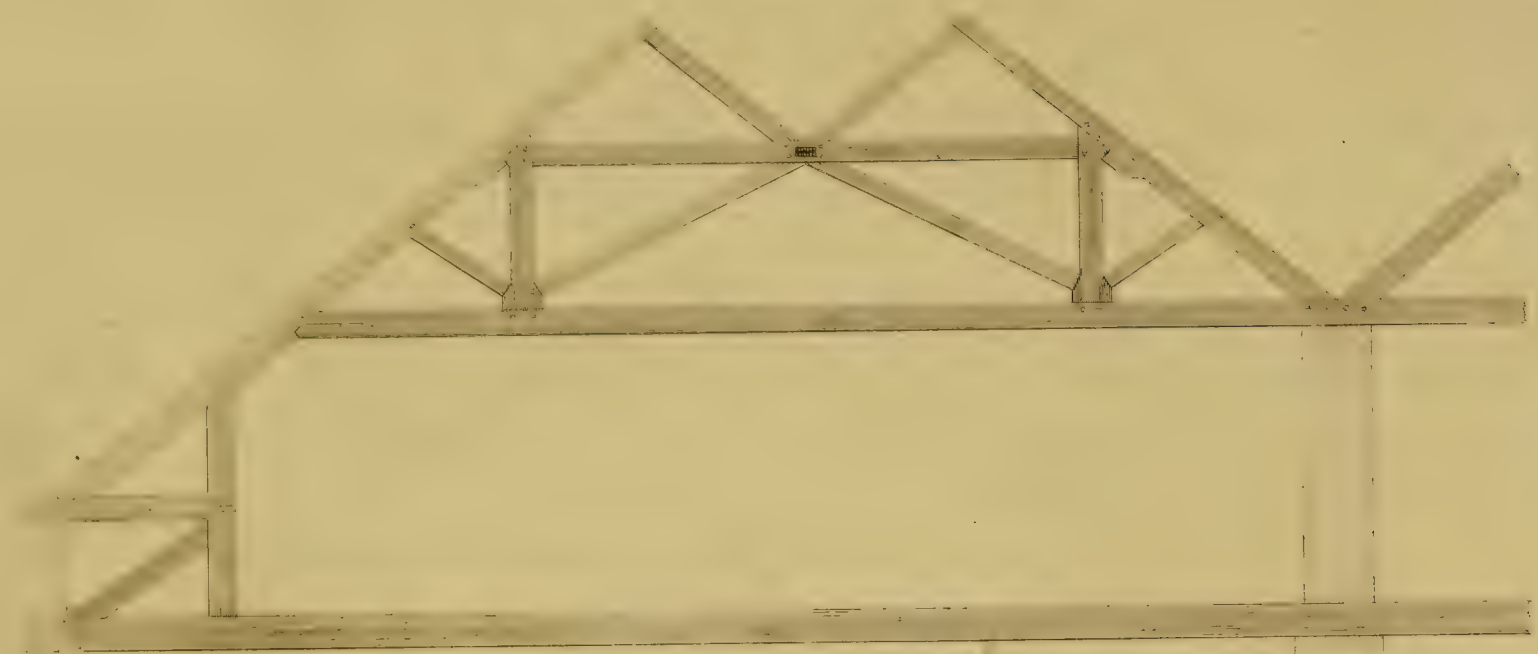
A Design for a Roof, with a Half Story.



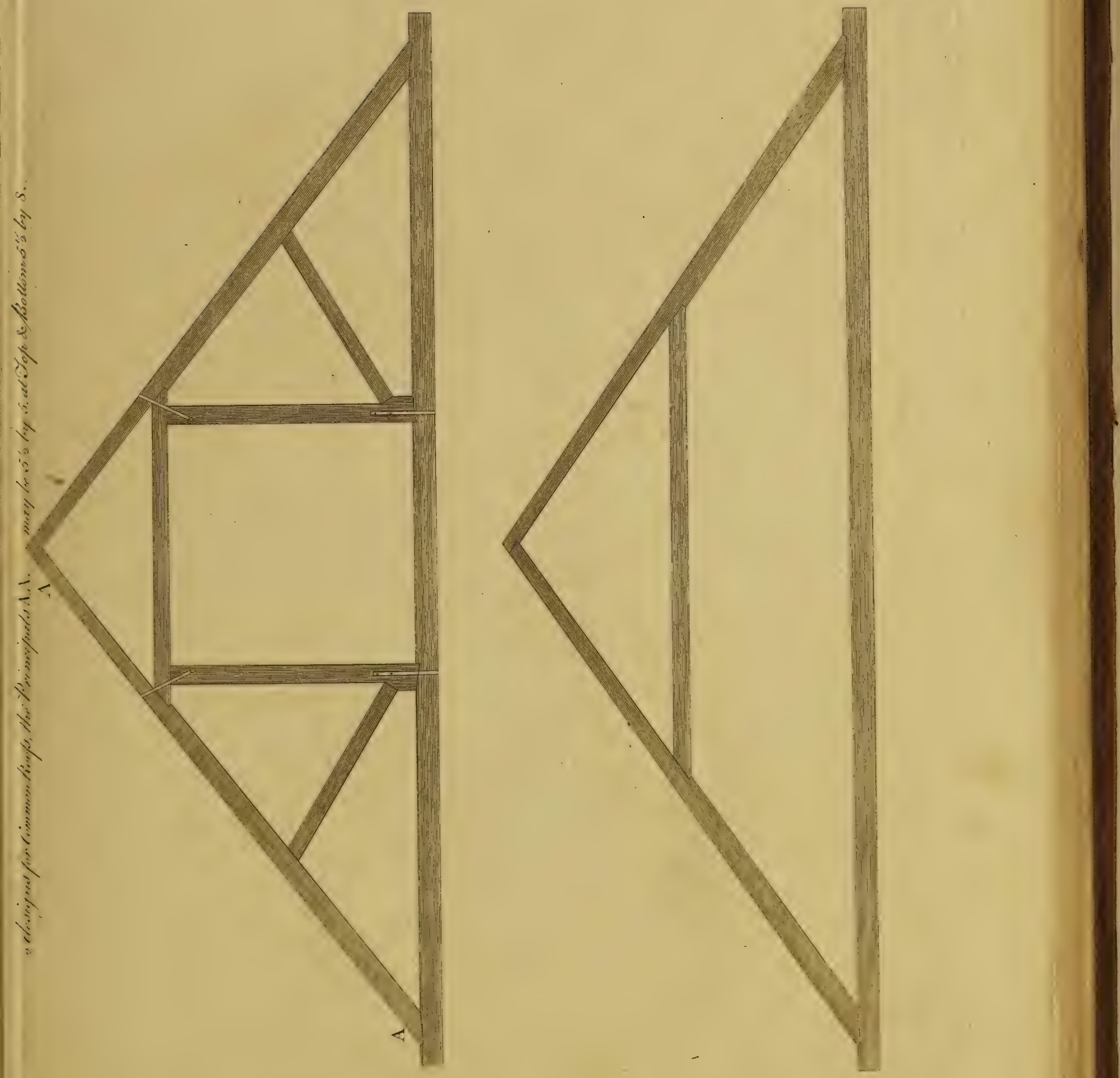
A different Design for a Roof, with a Half Story.



Another design for a Roof with a Half Story.

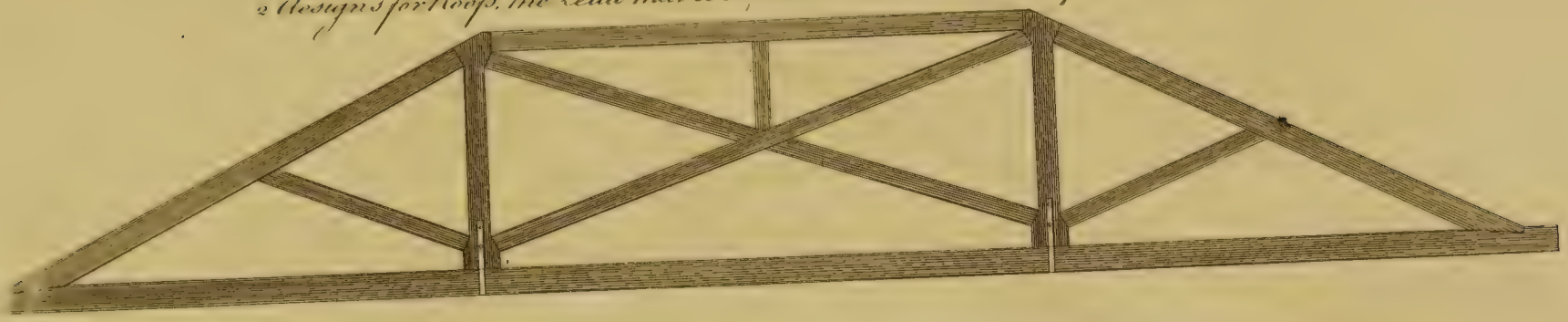


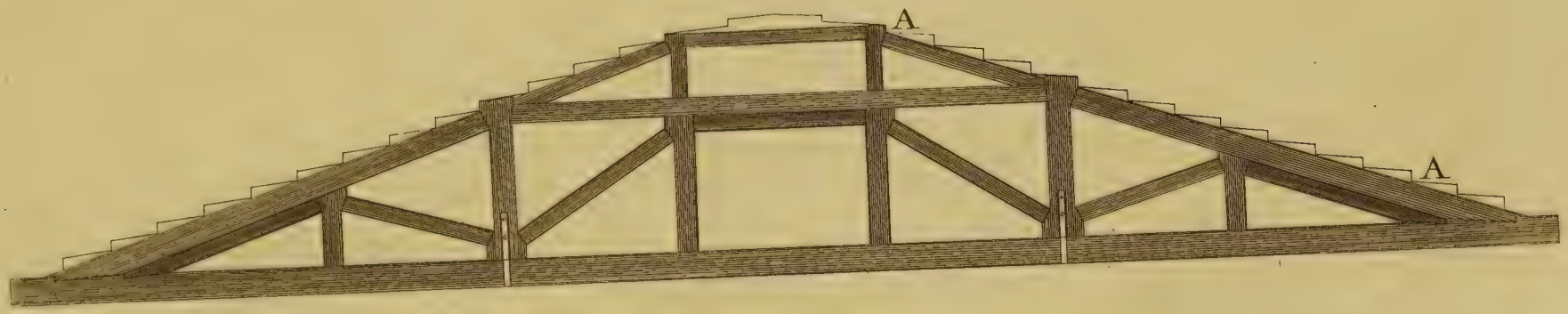
P. 27.



Architectural design for the principal entrance of a house.

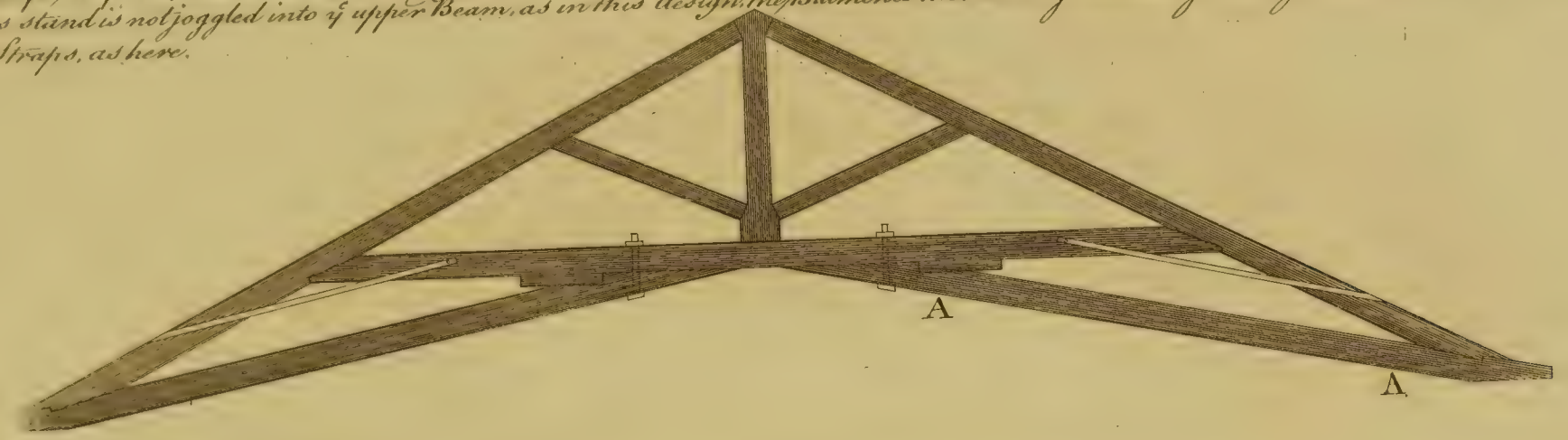
2 Designs for Roofs. the Lead that covers the lower lies in Drips at A A.

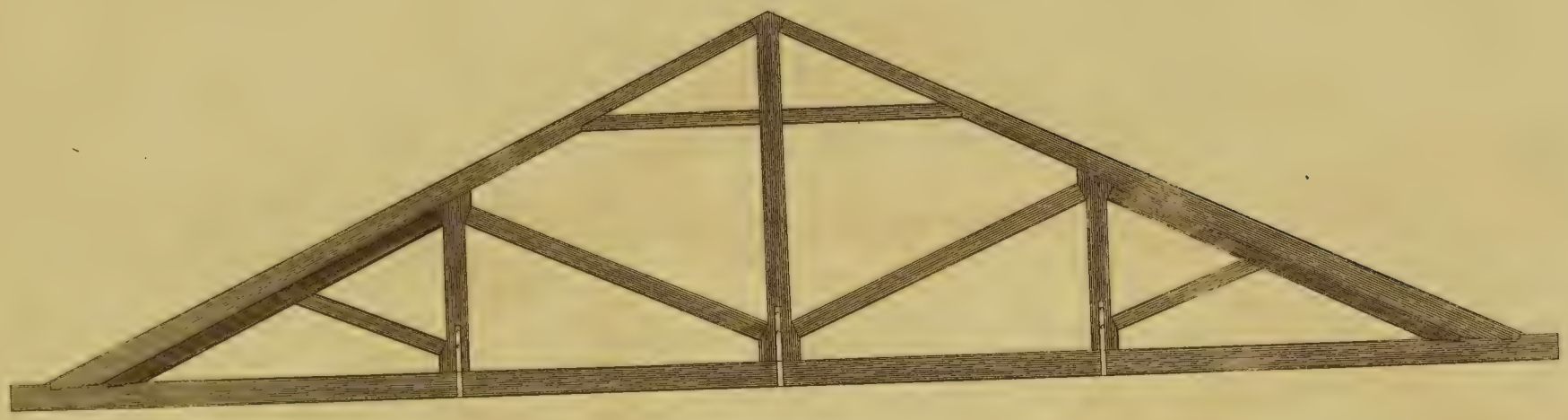




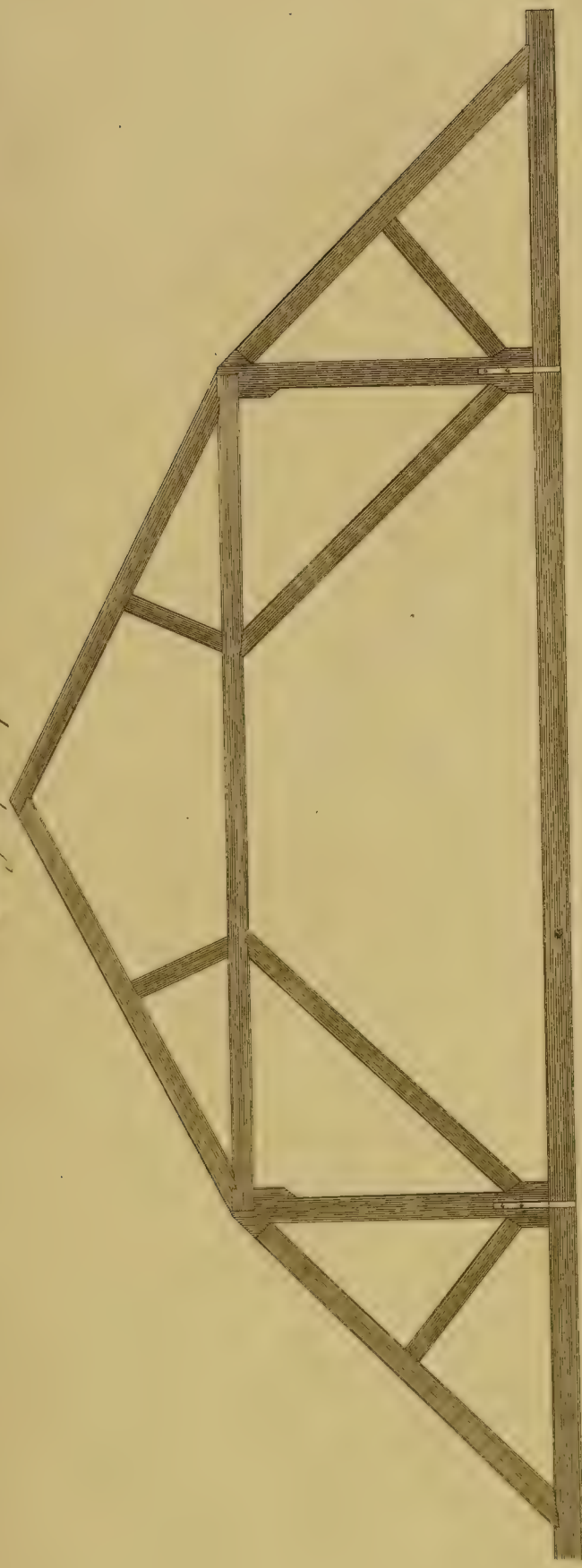
P. 69.

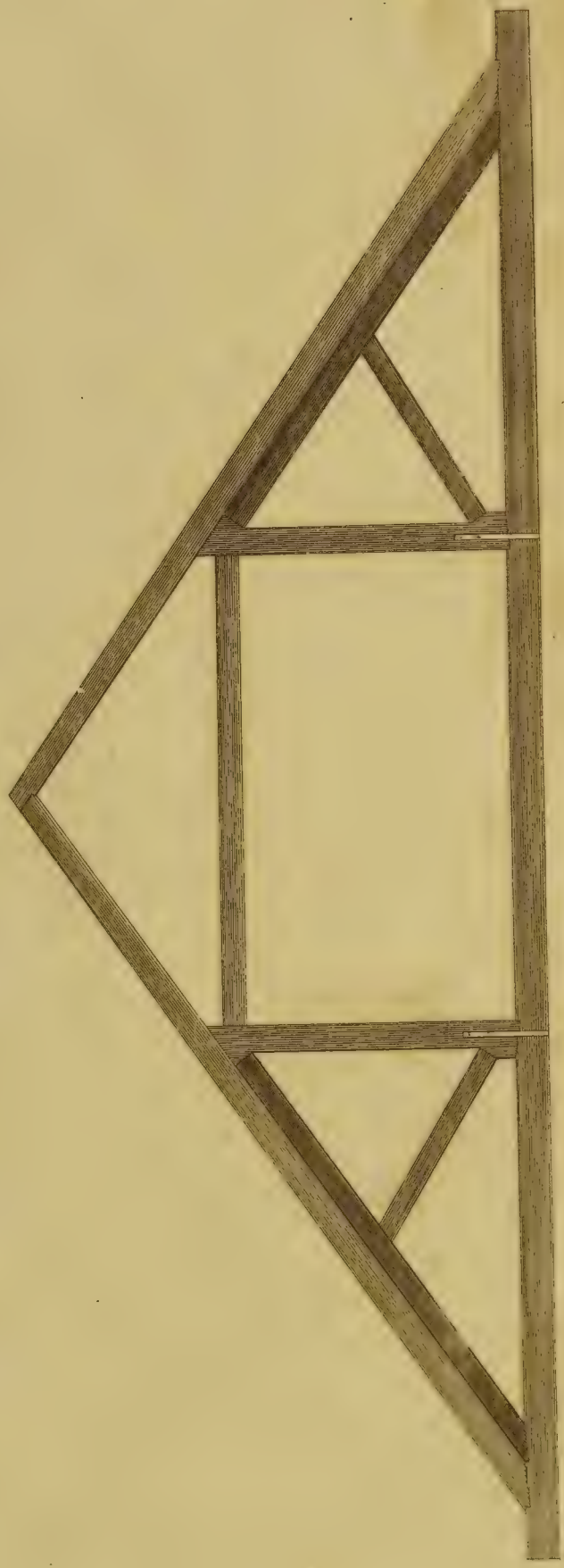
2 Designs for Roofs. There is something like the upper one over ye great Arches of St Pauls Church, only ye Beam at A on which the Principal Rafters stand is not joggled into ye upper Beam, as in this design, the Butments there being exceeding strong, neither are there any Iron Straps, as here.





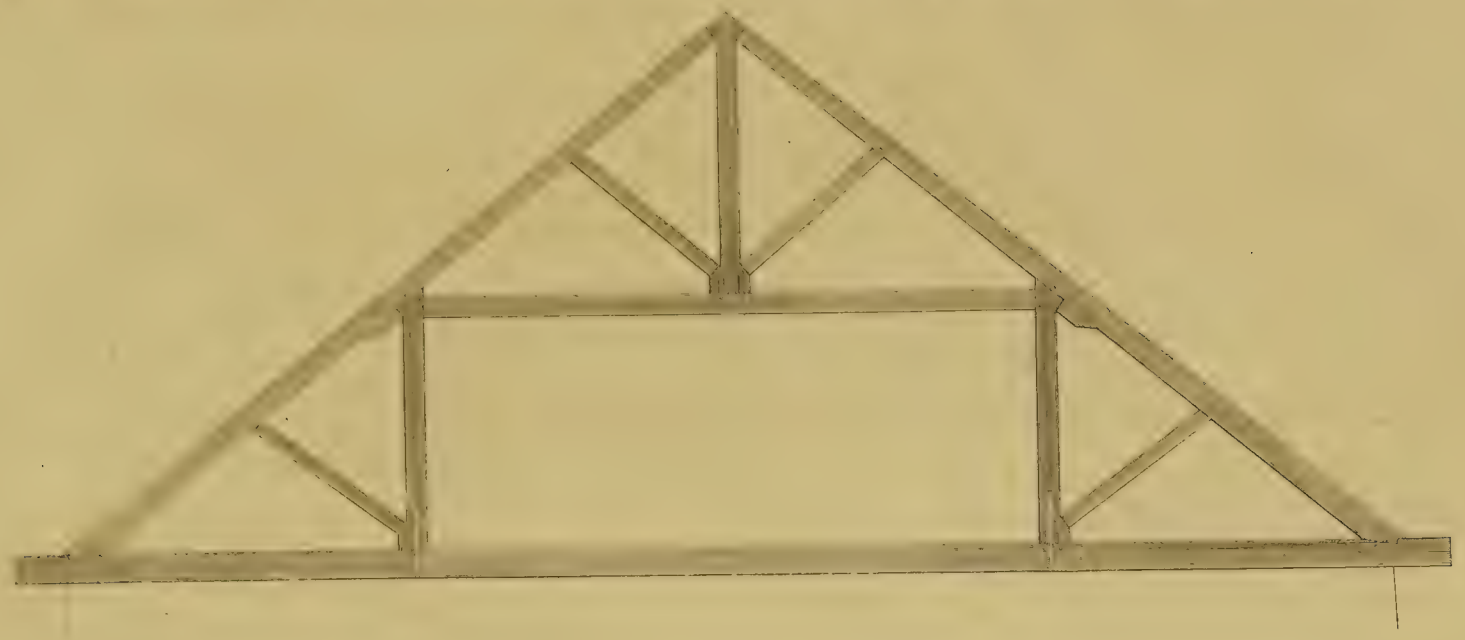
P. 30.

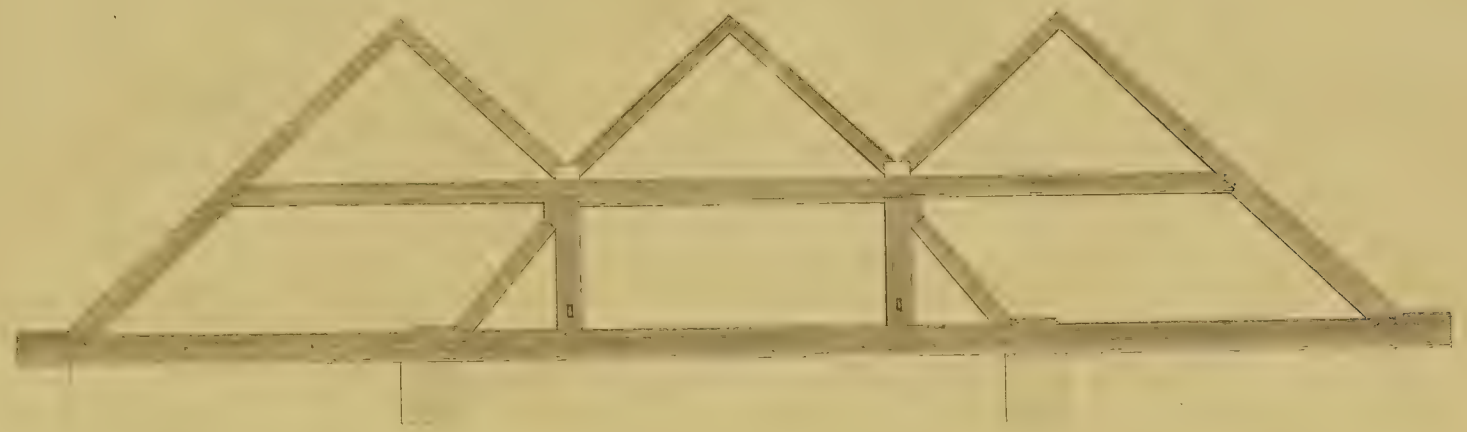




Design for Roofs.

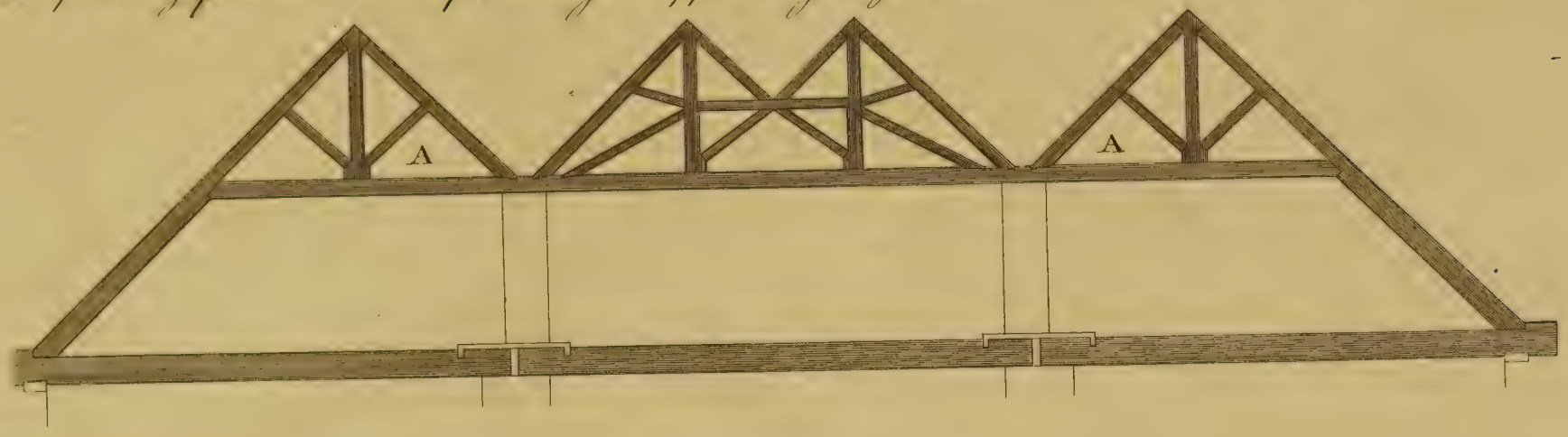
different Roofs. The Walls under y Lower are not directly under y Valleys. Therefore each Valley is supported by a Brace from y Wall.

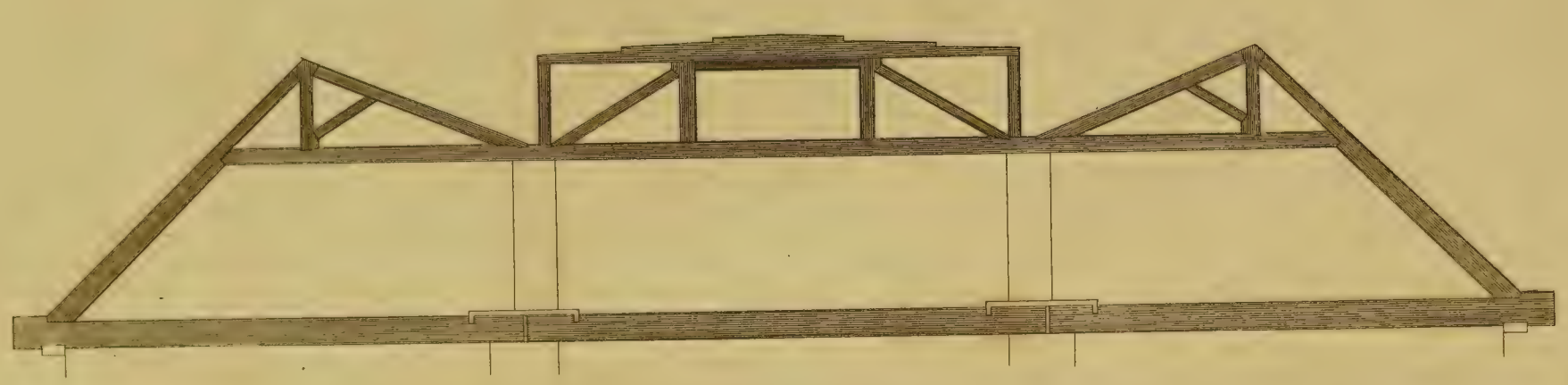




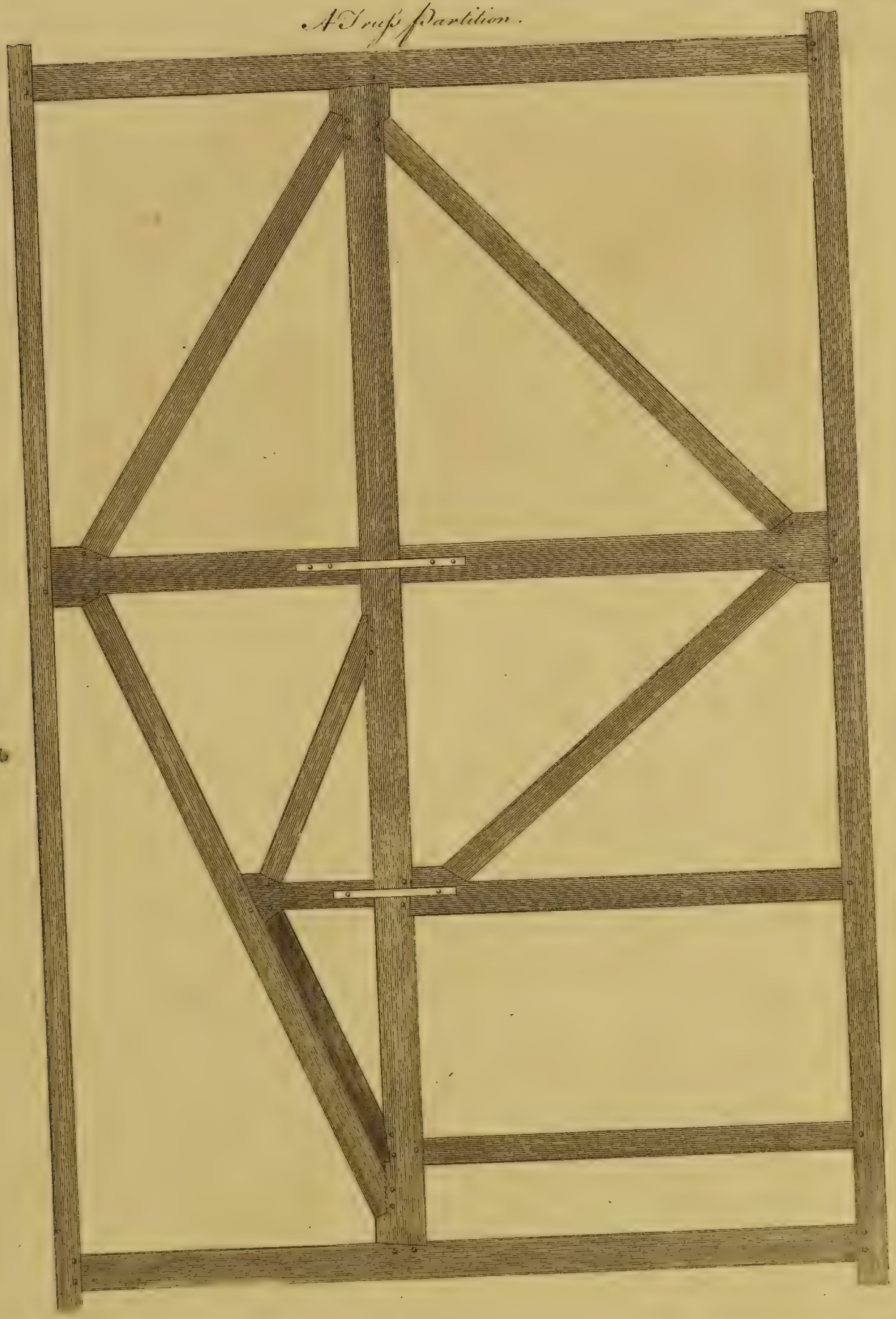
P. 32.

...other Roofs. The Truss part in y^e Middle of y^e Lower gives Opportunity to light y^e Middle Rooms at D. as is shown in Plate 4.

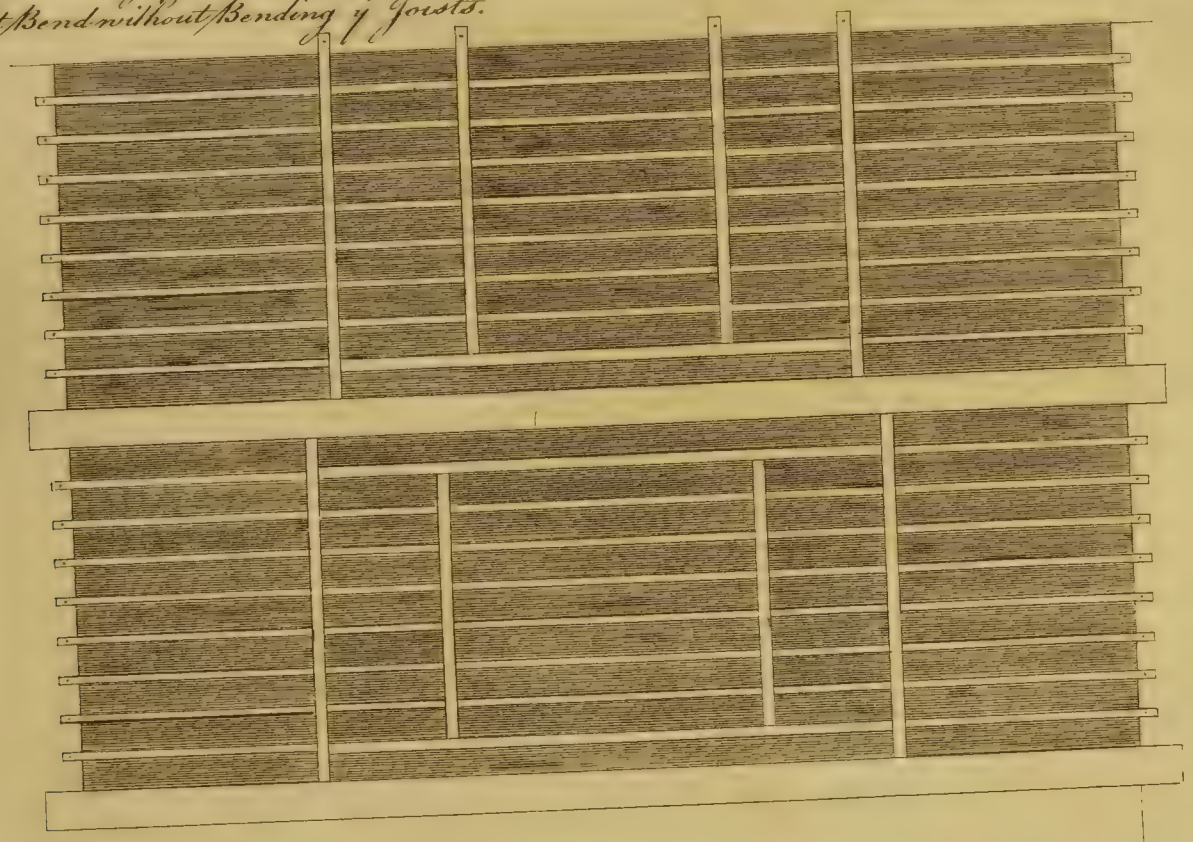


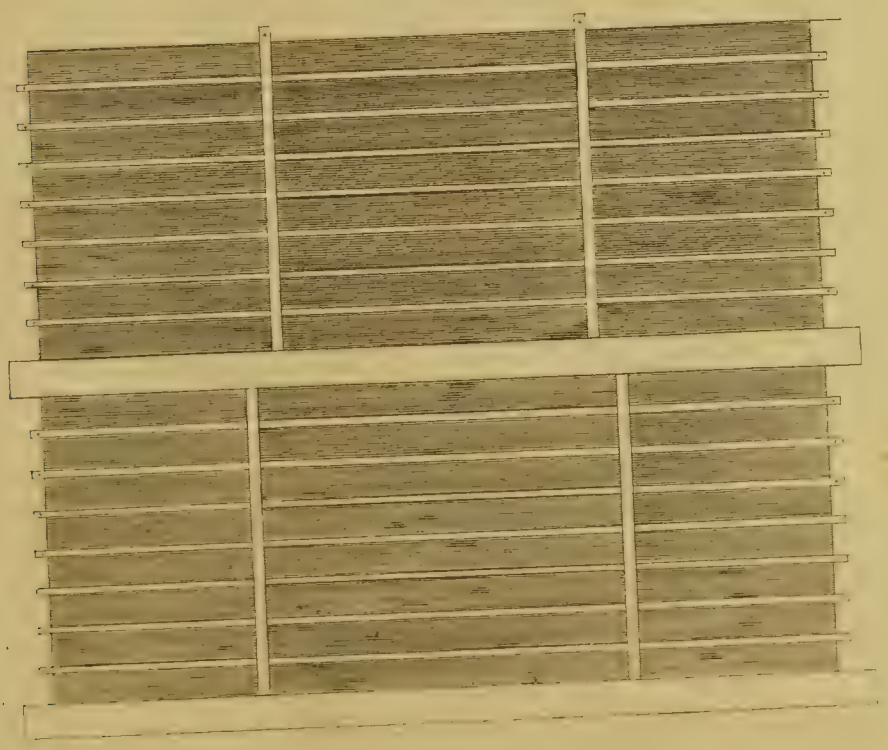


A Truss Partition.

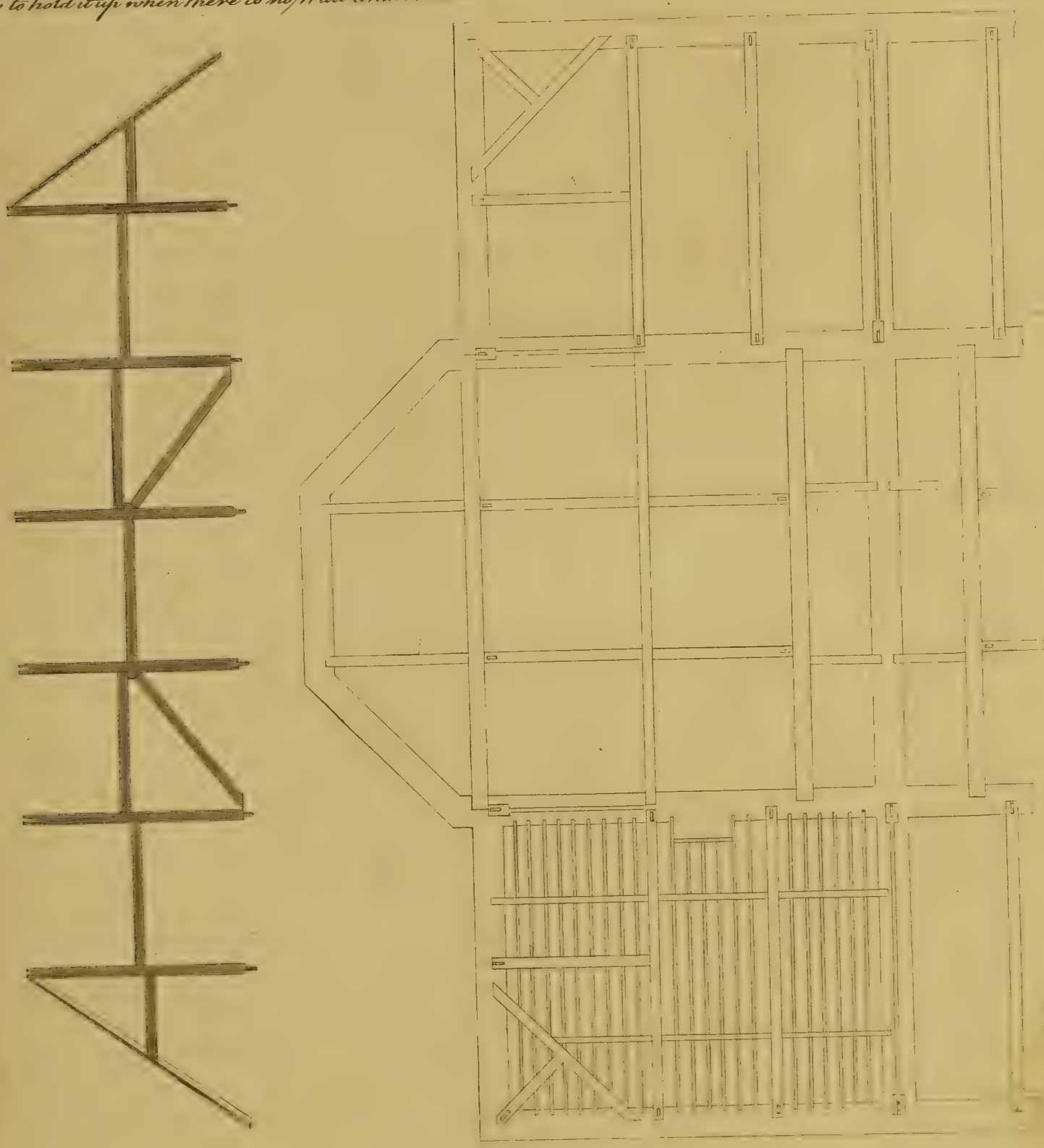


2 Designs for Framing of Floors, in each of them y^e Girder is prevented from Bending in y^e Middle, inasmuch as it cannot Bend without Bending y^e Joists.

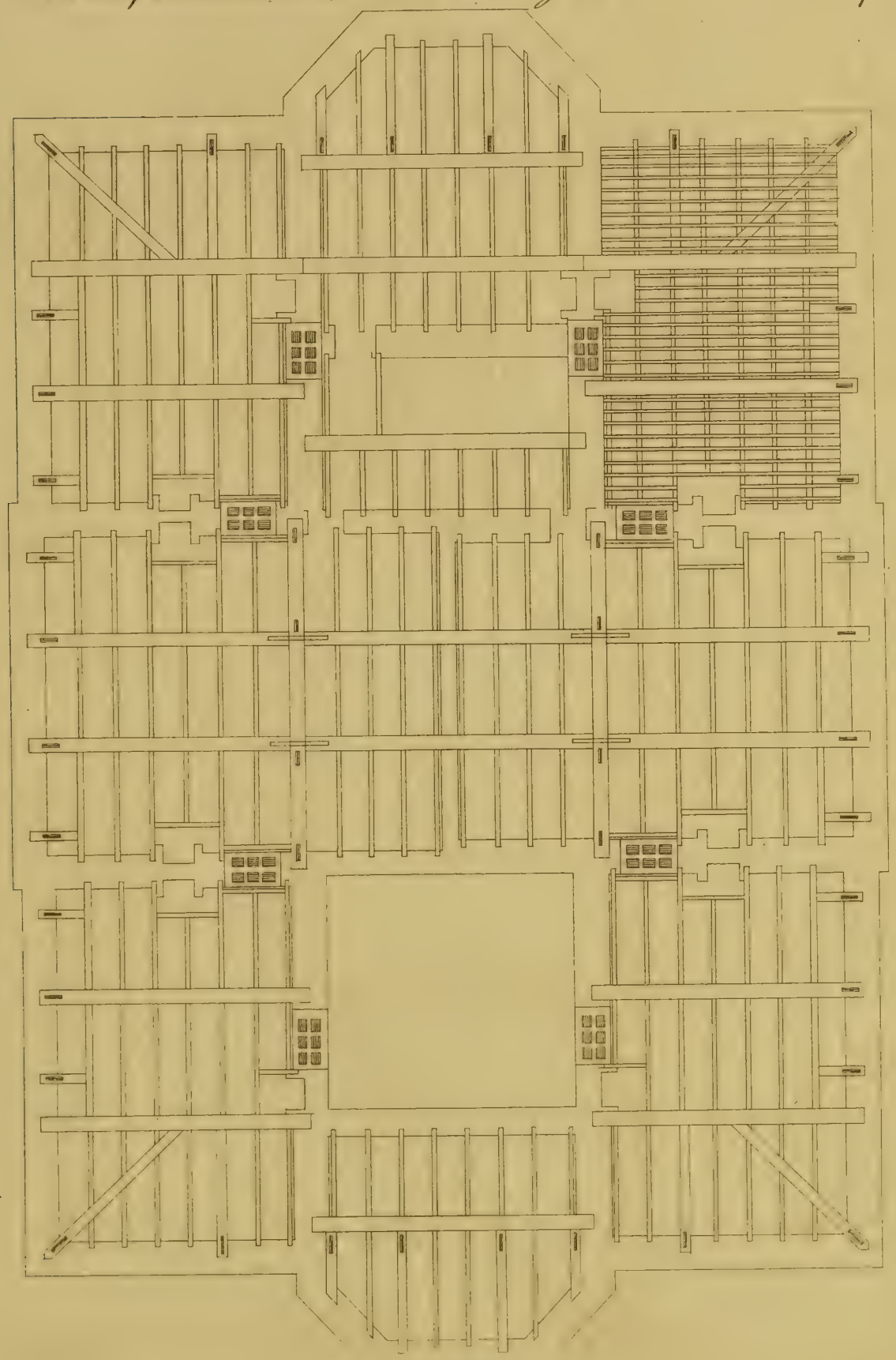




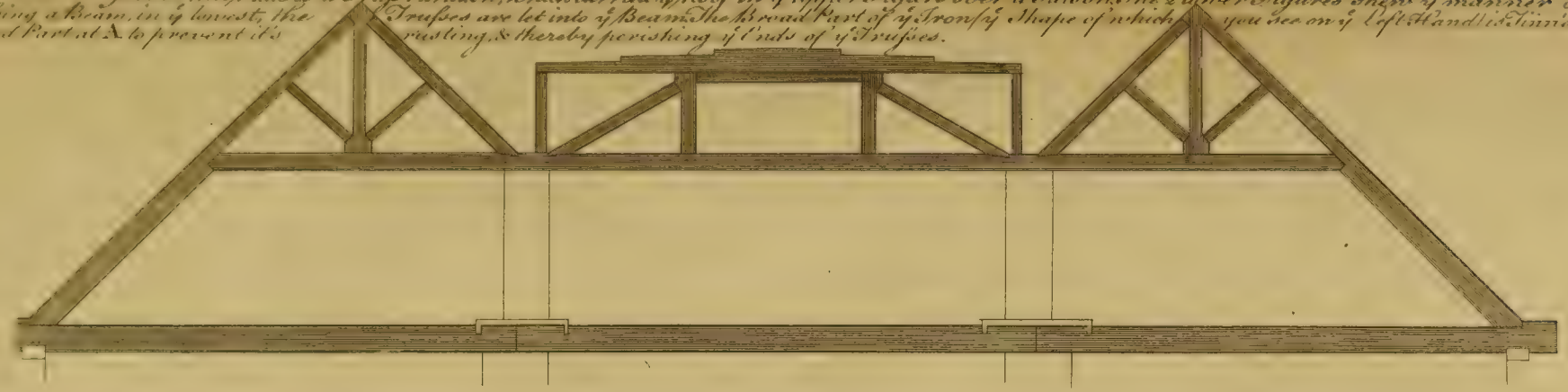
Part of ye Plan of ye Building. The Roof above it shews, not only how to free ye Beam from Oppression, but how to hold it up when there is no Wall underneath.



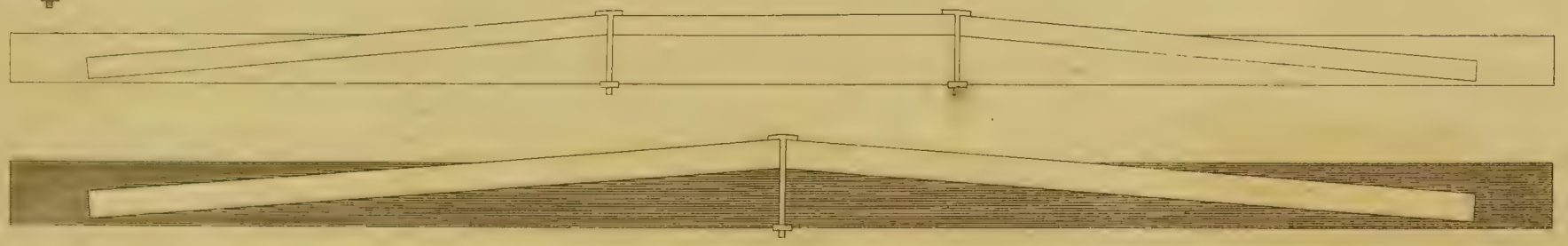
The Plan of a House, with all ye Timbers that belong to ye Floor. P. 37.



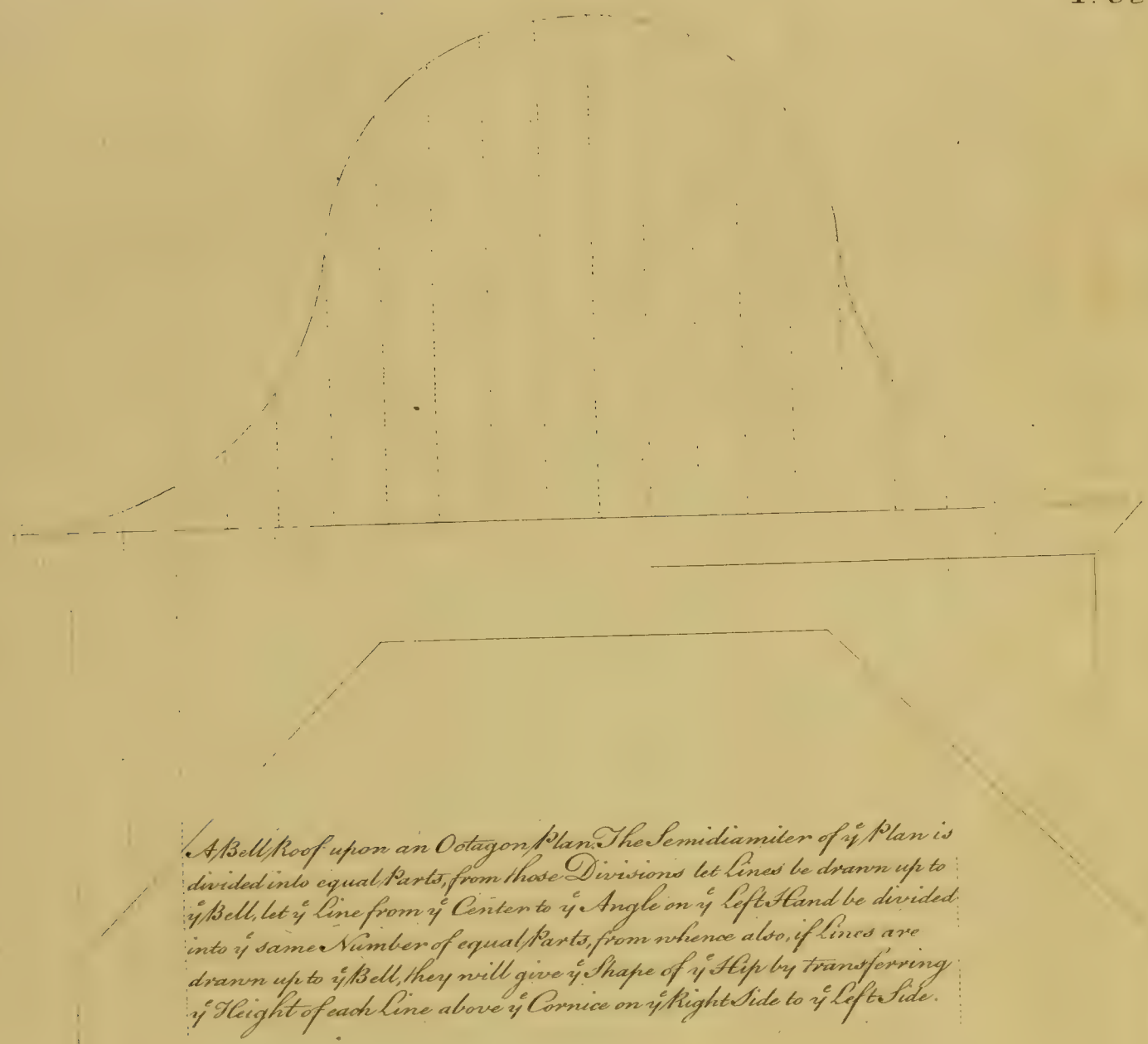
The middle Figure in this Plate is a Truss Partition, which carried of Roof in y upper Figure over a Stalwork. The 2 lower Figures shew y manner of Trussing a Beam, in y lowest, the Broad Part at A to prevent it's Trusses are let into y Beam. The Broad Part of y Iron, y Shape of which you see on y left Hand in Print at y rusting, & thereby perishing y Ends of y Trusses.



A

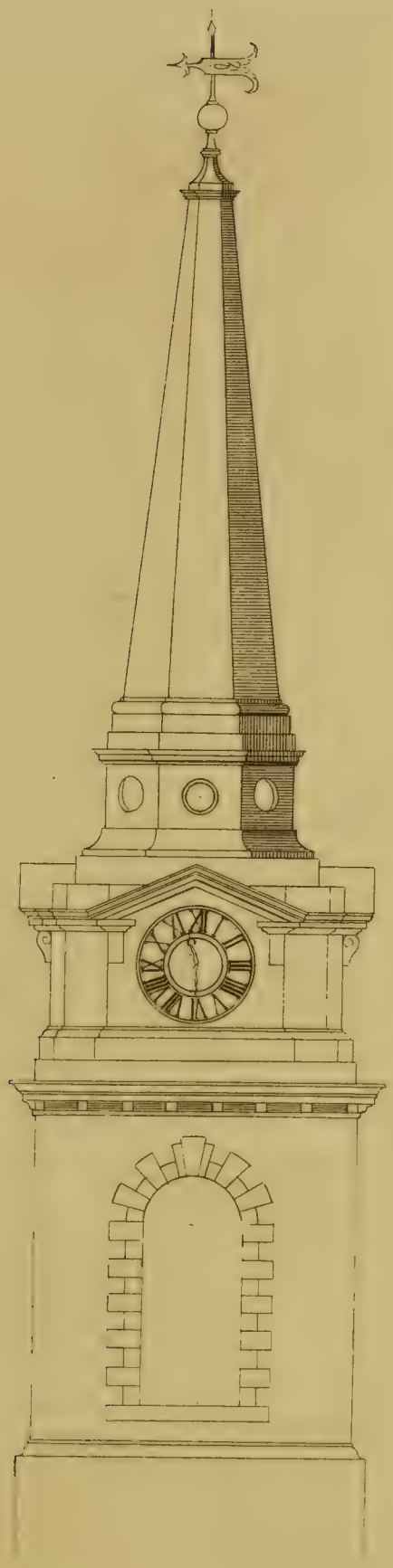


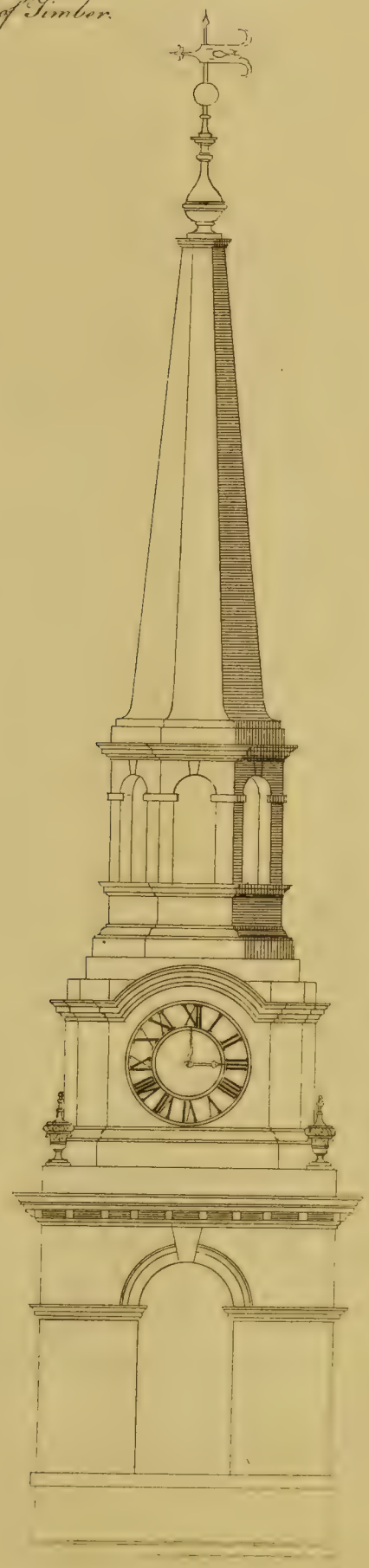
P. 38.

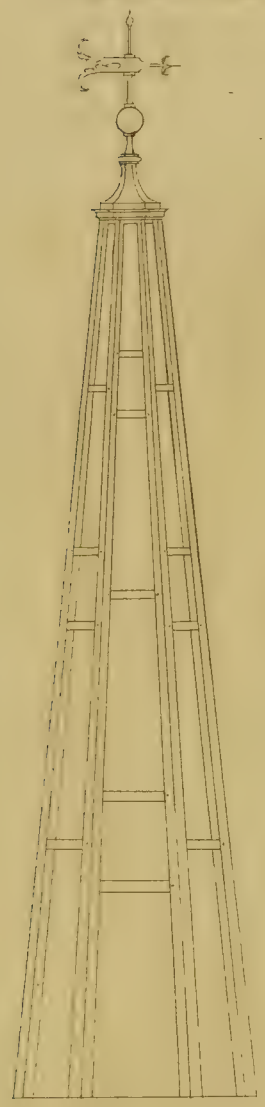


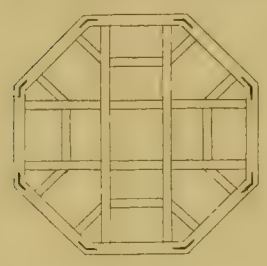
A Bell Roof upon an Octagon Plan. The Semidiamiter of ye Plan is divided into equal Parts, from those Divisions let Lines be drawn up to ye Bell, let ye Line from ye Center to ye Angle on ye Left Hand be divided into ye same Number of equal Parts, from whence also, if Lines are drawn up to ye Bell, they will give ye Shape of ye Hip by transferring ye Height of each Line above ye Cornice on ye Right Side to ye Left Side.

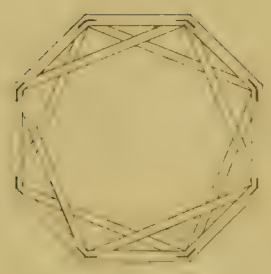
2 Designs for Spires made of Timber.

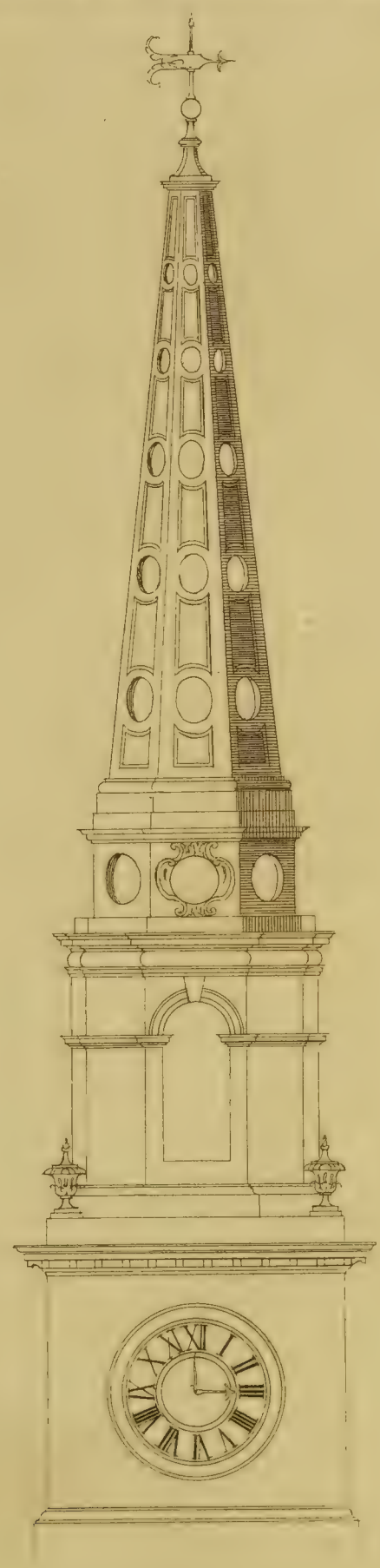


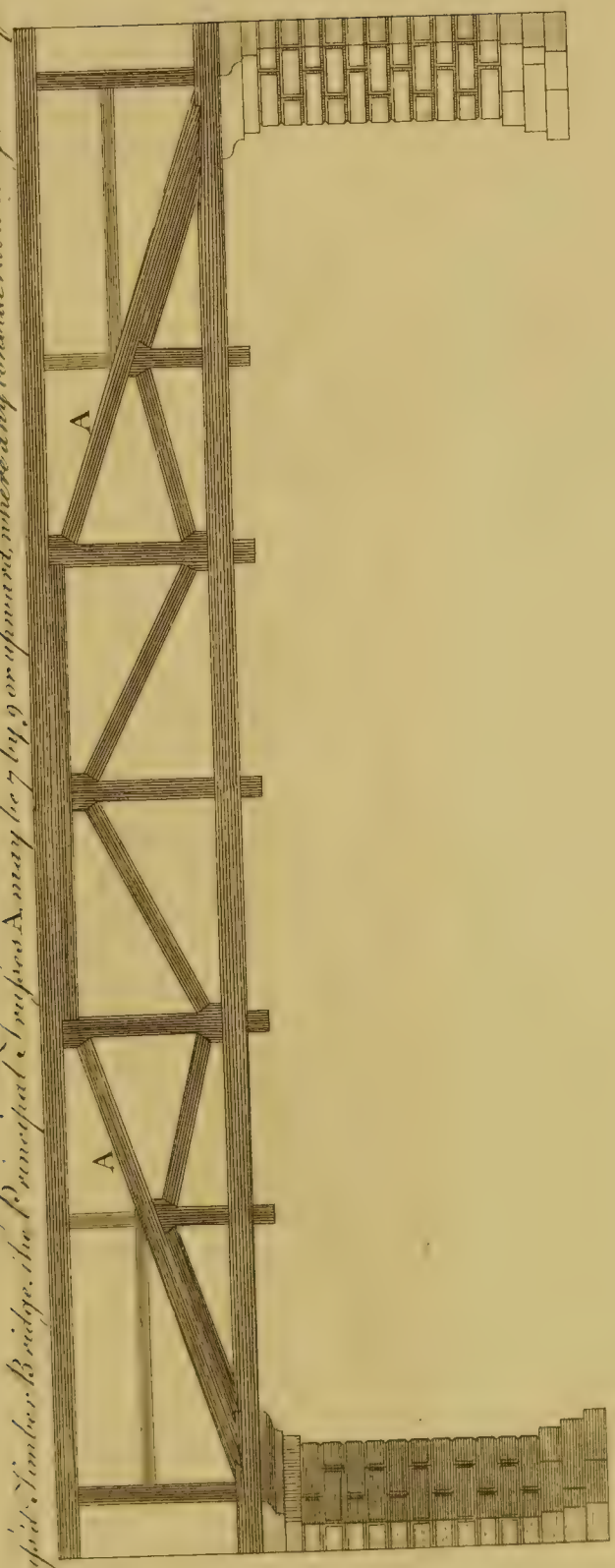






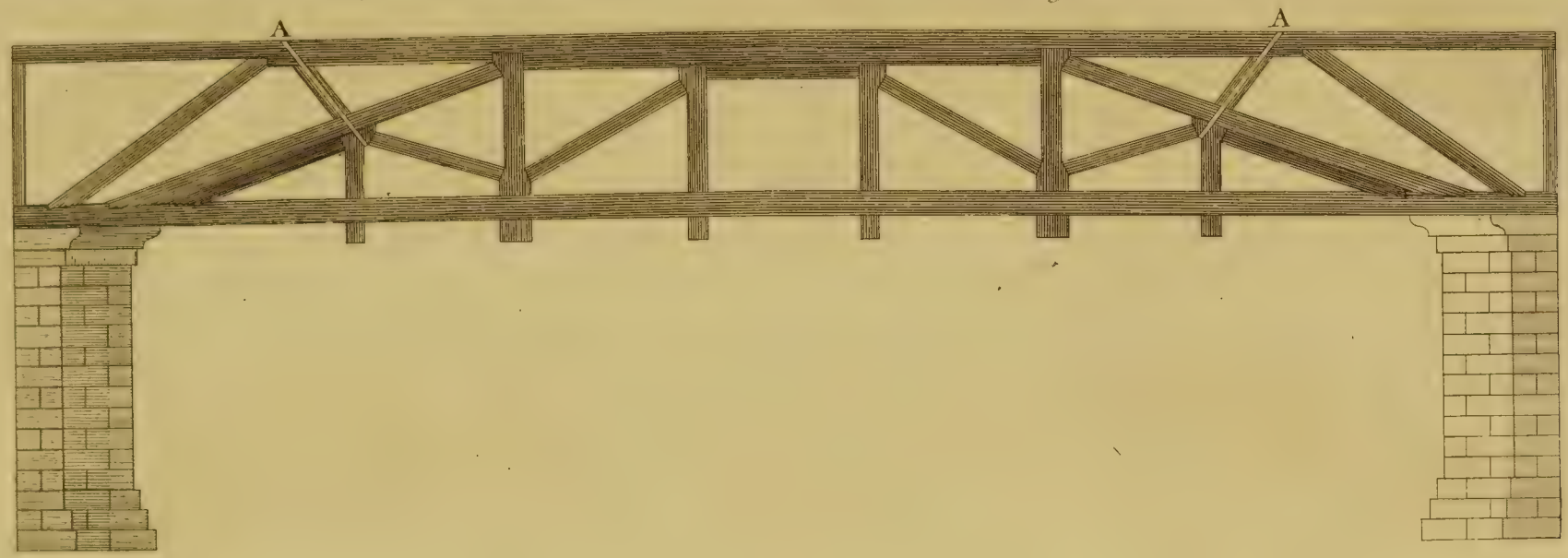




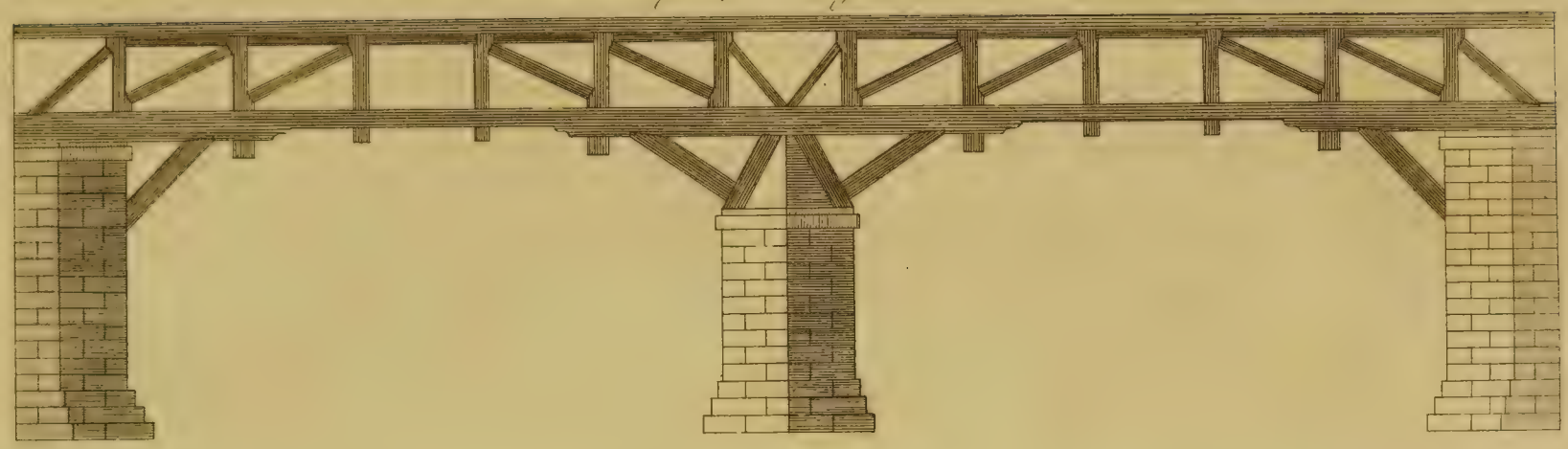


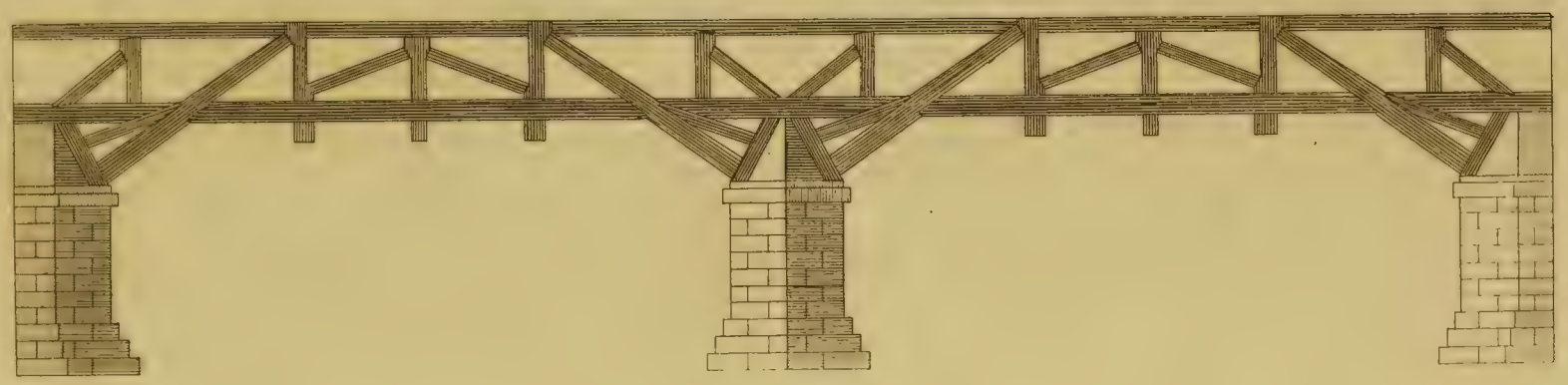
A Temporal Timber Bridge, the Principal Truss to A may be of any length as required.

A Bridge of a larger Extent. The 2 Iron Straps at A from y^e^ Top Rail to y^e^ short King Post, answer y^e^ same Purpose as Braces and wealth would do.

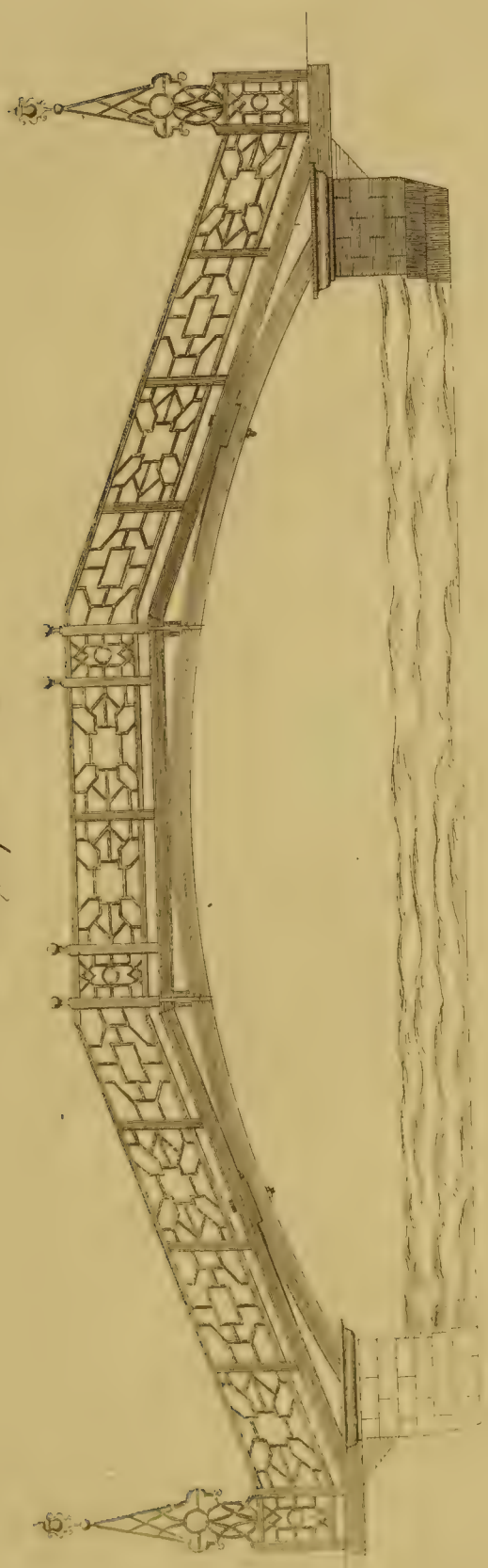


P. 43.

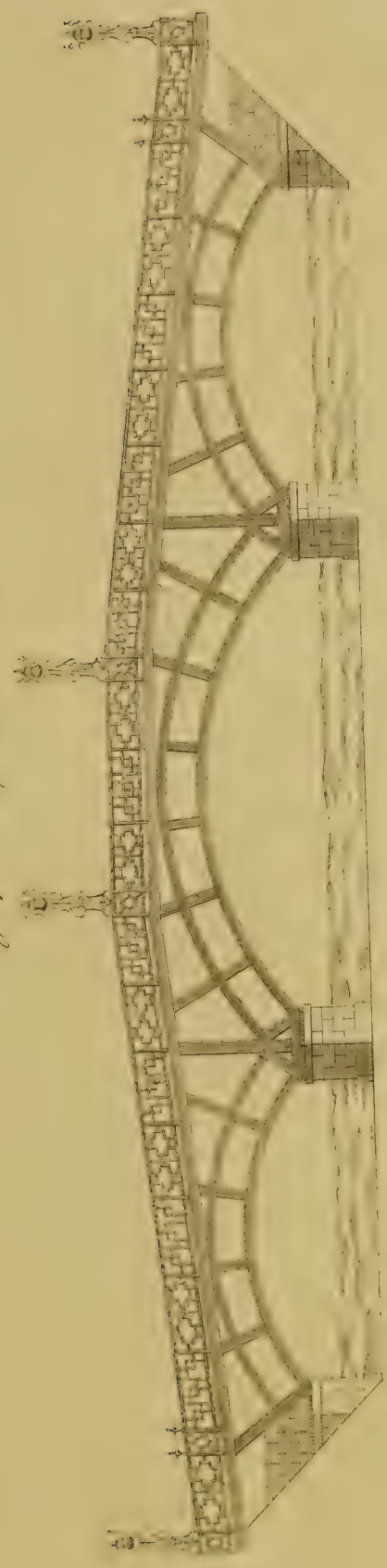




A Design of a cast Iron Bridge.

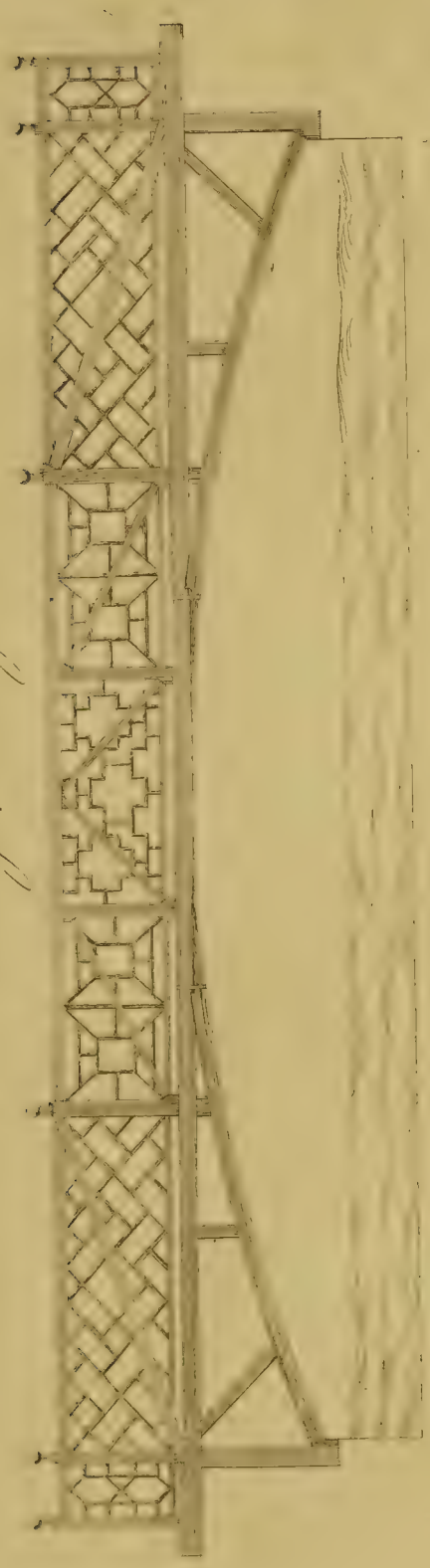


A Design for a Bridge.



A Design for a Bridge with 3 Arches.

A Design for a Bridge.



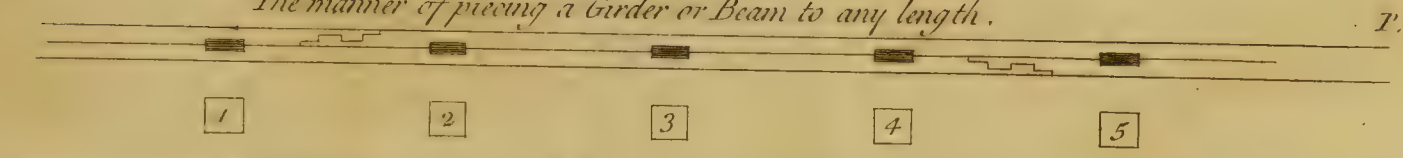
A Design for a Bridge.

. A Level Bridge which may be extended to any Length. The Abutments against which ye King Posts bear are not put on, but left of ye Solid Beam as at A.

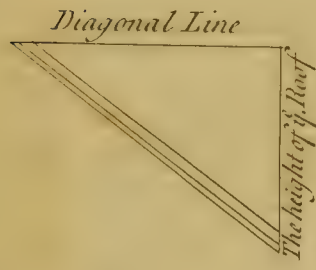
P. 50.

The manner of piecing a Girder or Beam to any length.

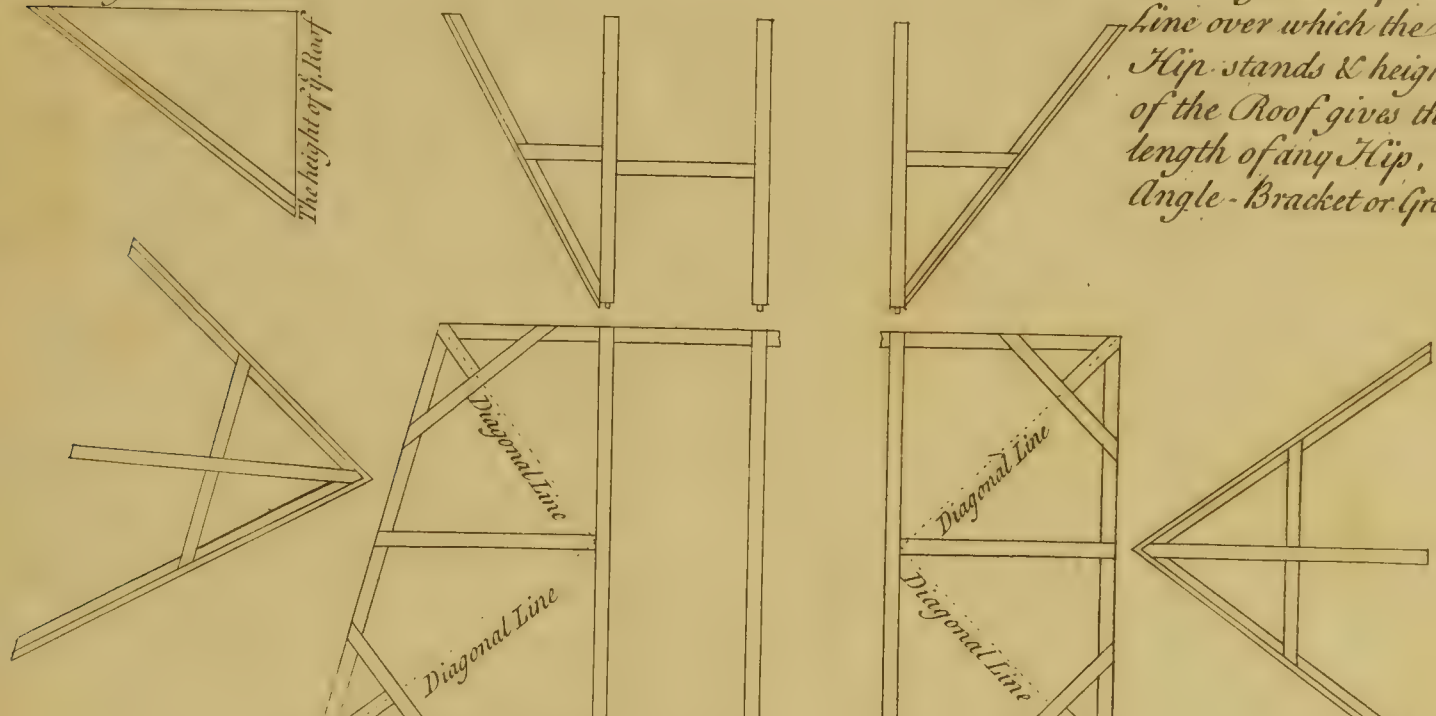
P. 51.

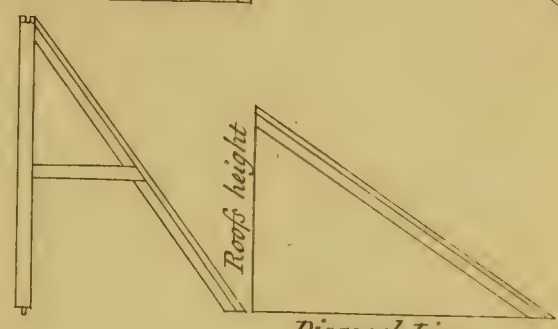


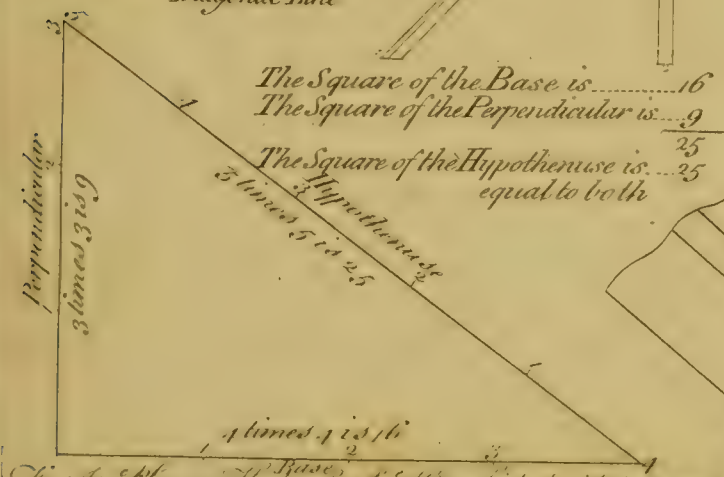
The manner of piecing Bond Timber

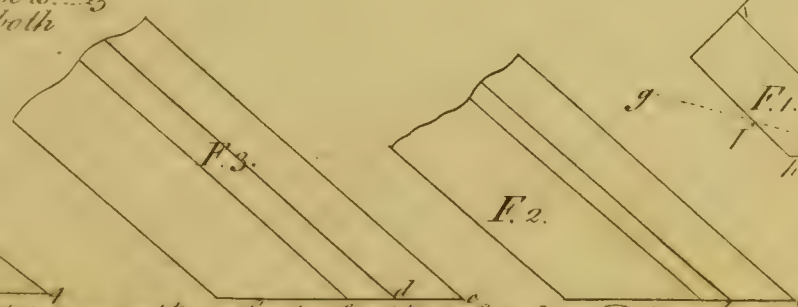


The Diagonal or Ground Line over which the Hip stands & height of the Roof gives the length of any Hip, Angle-Bracket or Groin.









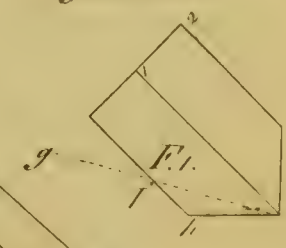


Fig. 1. As ye Plan or Thickness of ye Hip, which divide into 2 equal Parts, then having ye Pitch of ye Hip, as in Figs. set Half ye Thickness of ye Hip from a to b, this shews what Wood must be taken off to back ye Hip. Transfer Half ye Thickness of ye Hip from d to e in Fig 3. if ye Building be bevel, as is expressed by ye dotted Line g. Fig. 1. then take ye Distance from f to h, and set it from d to e, this will give ye Back of ye Hip. 1. 2. 3. 4. 5. In ye uppermost Figure in this Plate represent Pieces to drive into ye Holes over them, when ye Sides of ye Beam are screwed together. Take care that the Grain of these Pieces be Lengthwise, agreeable to the Grain of the Beam.

Fig. 1.

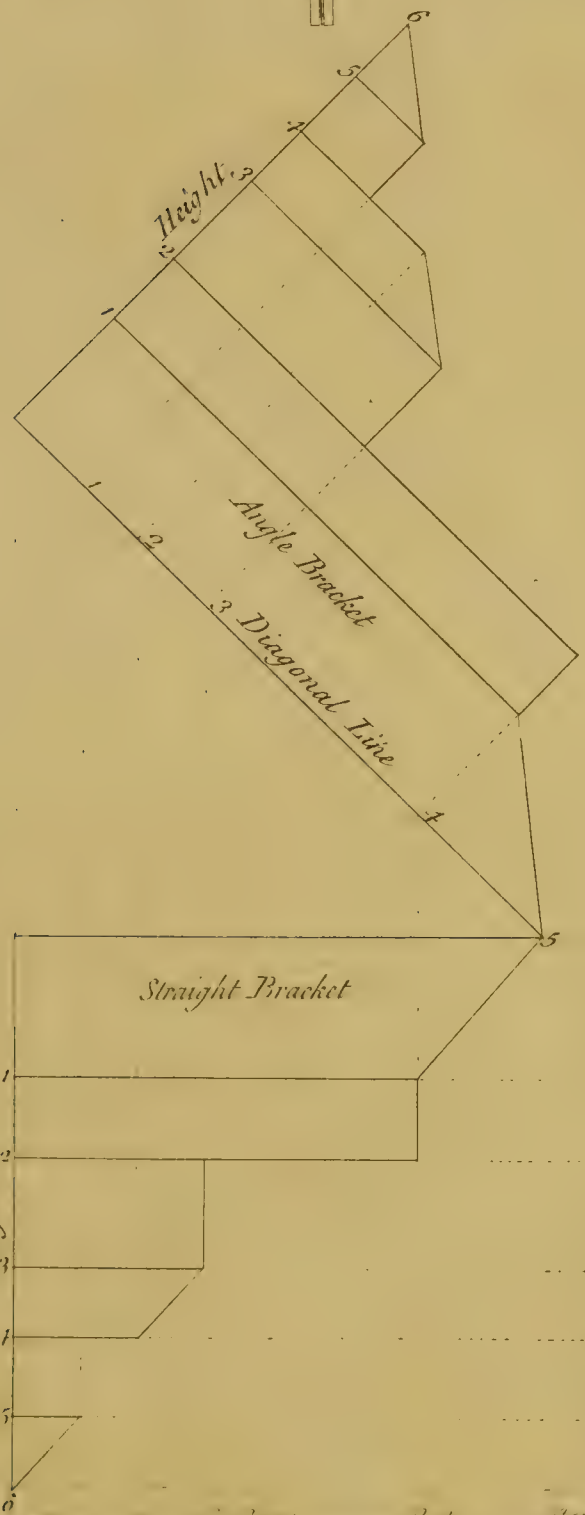


Fig. 2.

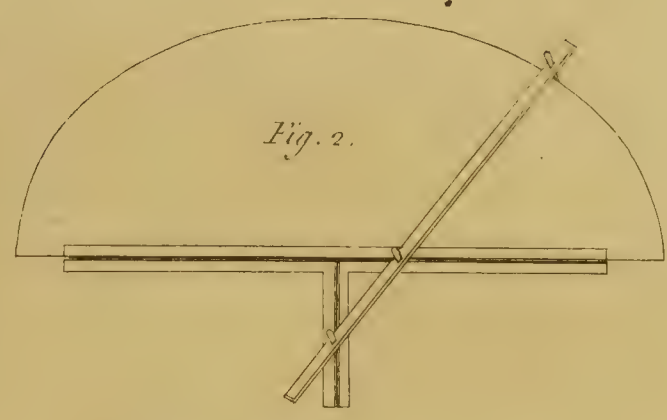


Fig. 3.

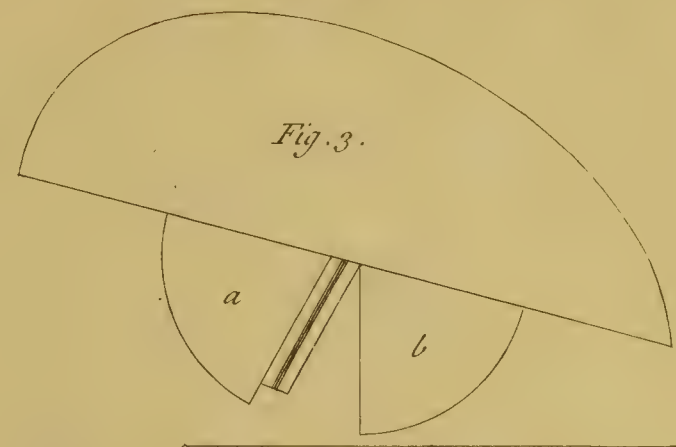


Fig. 4.

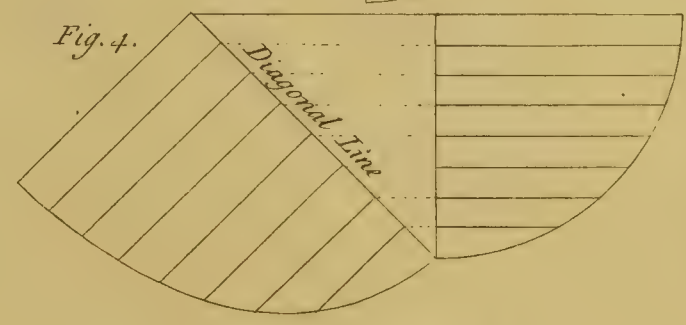


Fig. 3. The Leg of the Trammel fixd to the Triangle a will produce such a Curve as is here described, if fixd to the Triangle b it will produce the Curve at Fig. 1.
Fig. 4 is an Angle Bracket to a Quarter of a Circle. Transfer the Diagonal Line 1.2.3.4.5. even with the Top of the Strait Bracket, then draw the Line 1.2.3.4.5.6.& the dotted Lines from these Divisions in the Strait Bracket to the Angle Bracket, give each Part it's proper Height. All the Heights upon the Strait Brackets are equal to those upon the Angle Bracket, the Divisions are only wider, as given by the Diagonal Line.

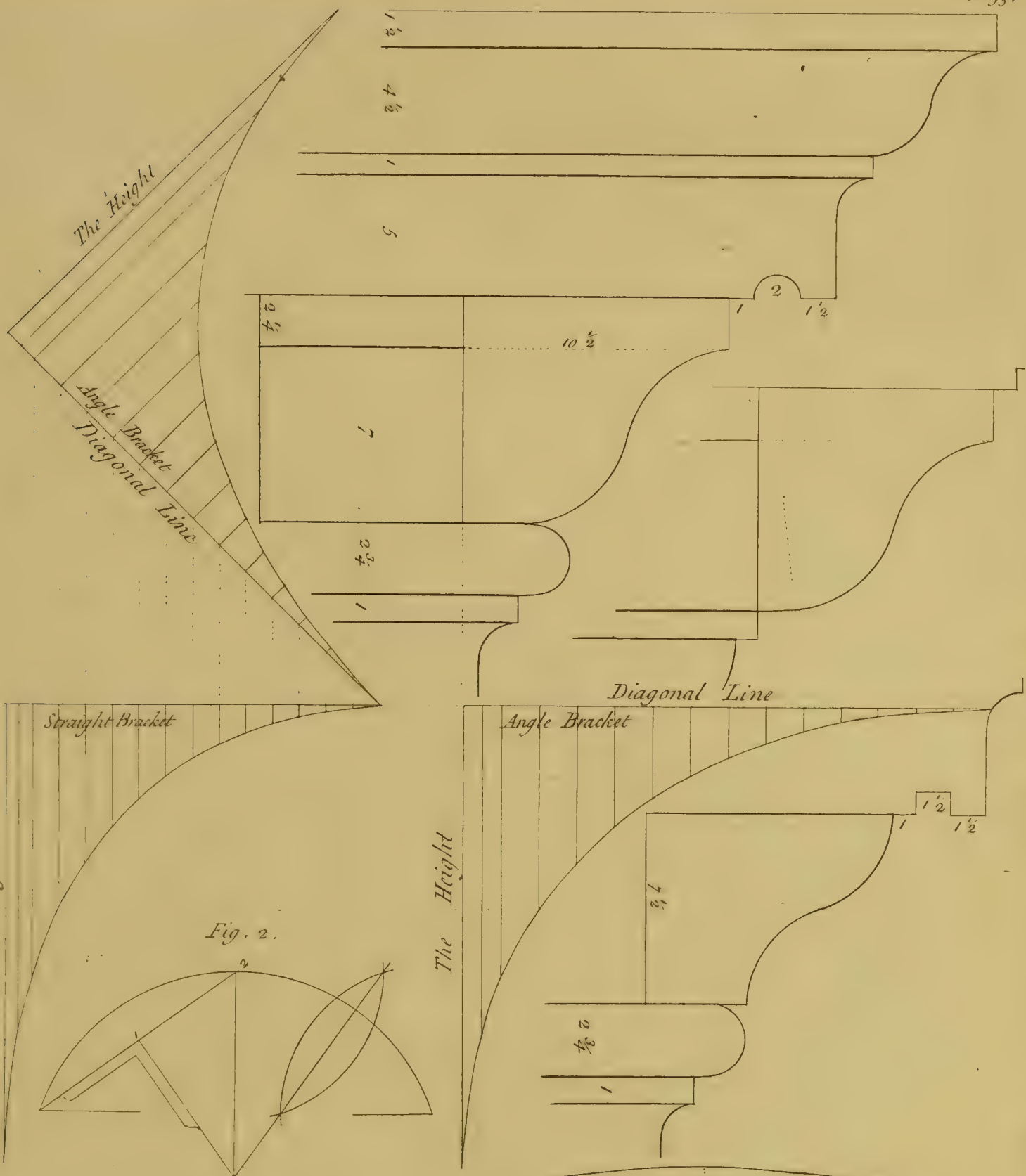
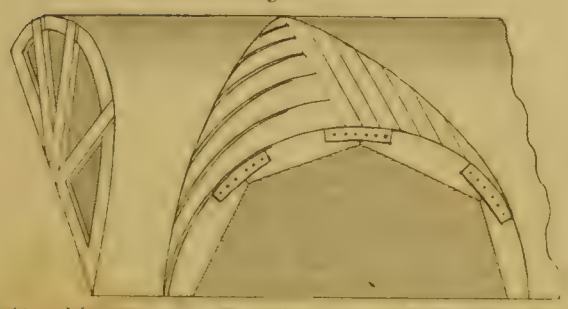


Fig. 2.

Fig. 1.



Chord 48

To find the Centre Square the half Chord ... 24

21

96

48

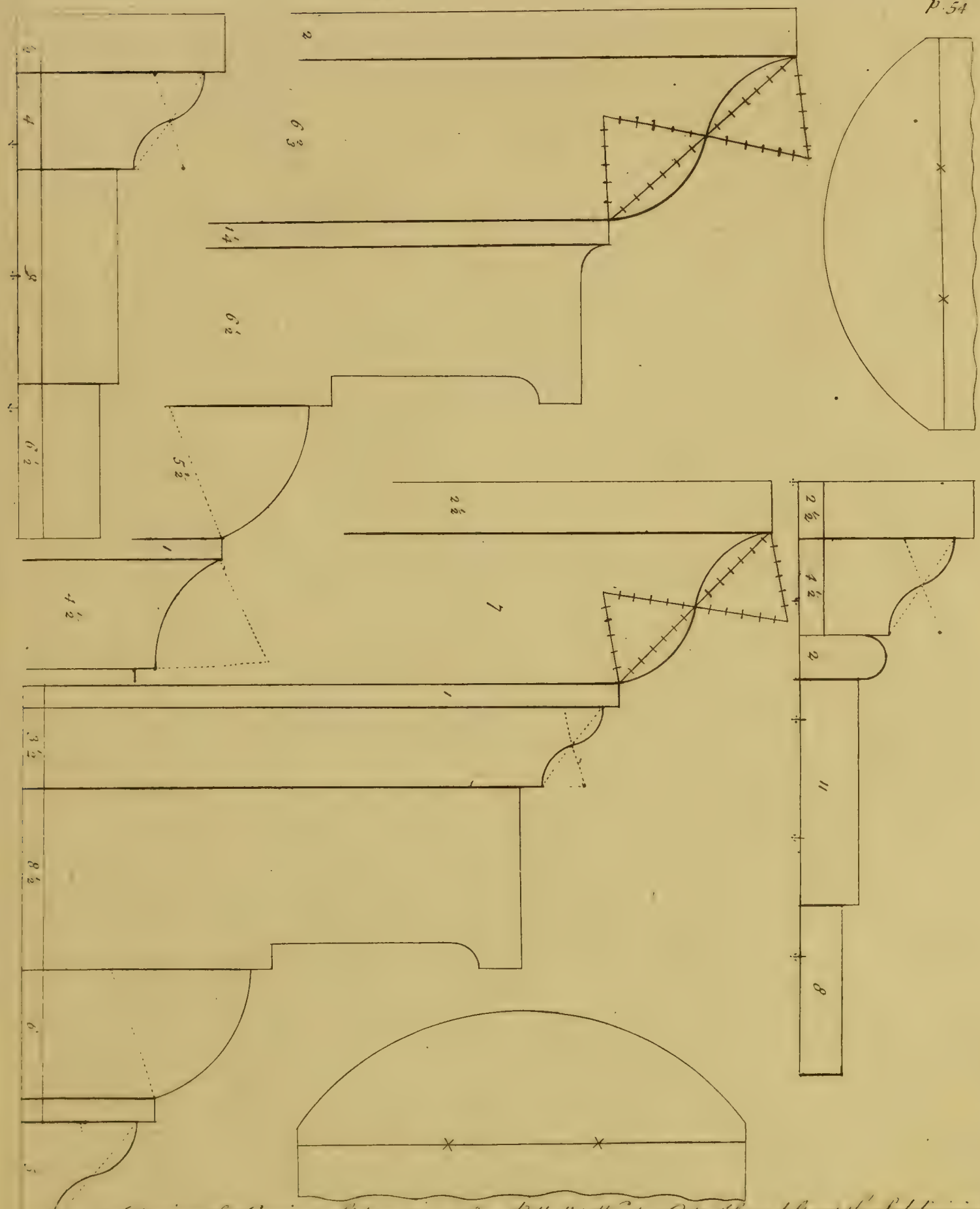
Prod.t divide by 4 ½ height of the Arch ... 4) 576 (144 produd

Add the height of the Arch ... 4

Whole diameter of the Circle ... 148

Half ... 74

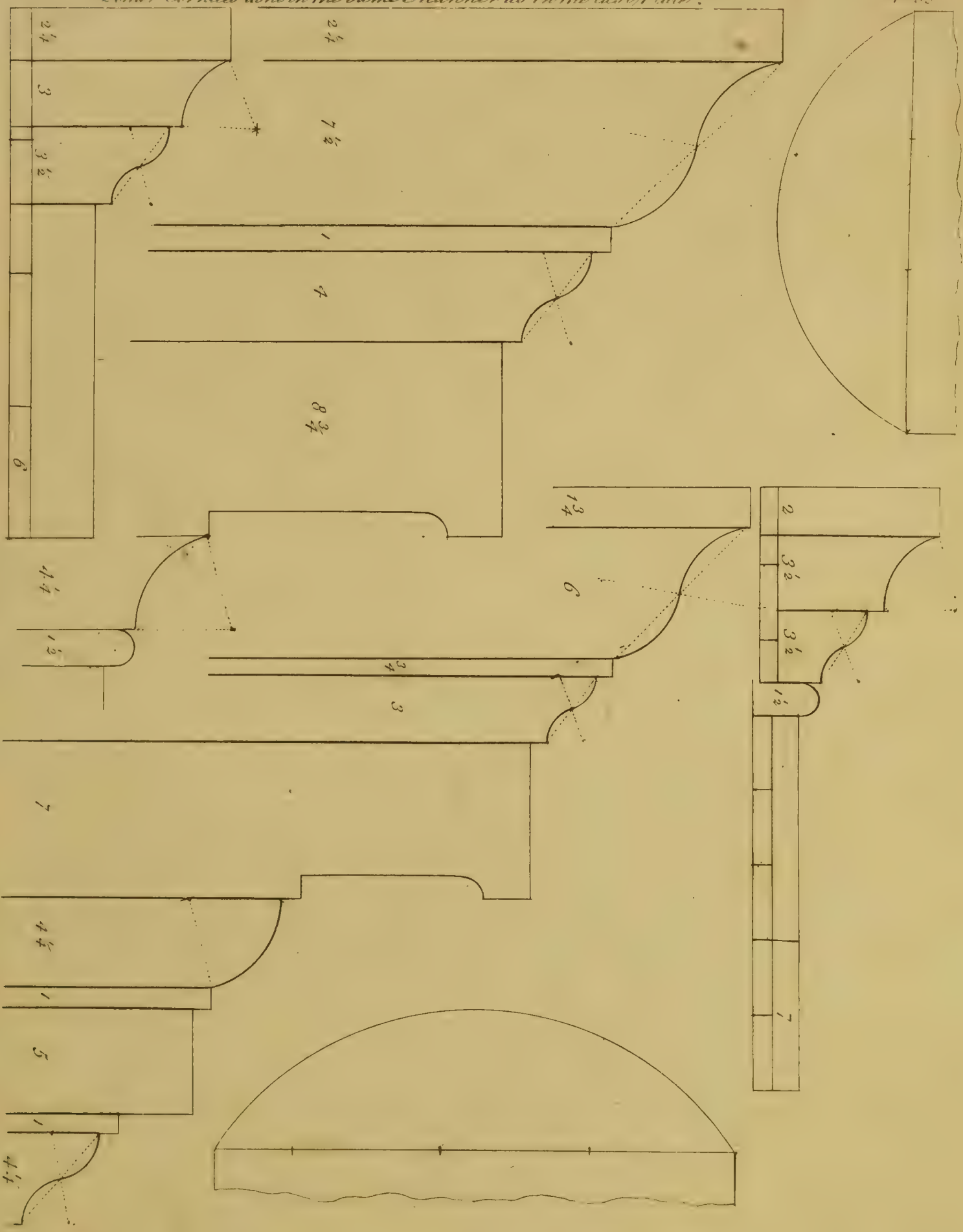
Figs. The Form of a Groin, one Half is boarded, the other Half shews the naked Ribs. Fig. 2 Two common Ways to find the Center, in order to strike a Segment of a Circle, to the Right Hand is shewn how to find of Circles by Figures. Above in this Plate, two Ways are shewn of forming an Angle Bracket. The first



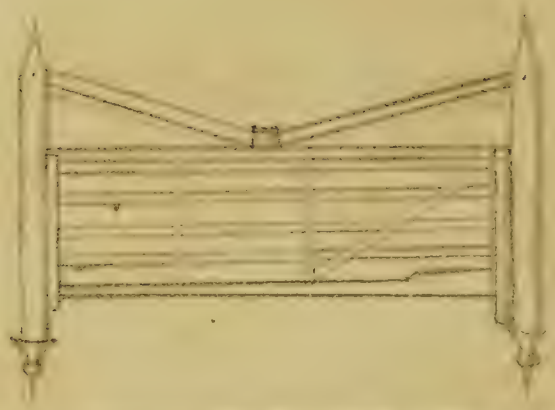
I Designs for Cornices, which are traced from Palladio's Wooden Cuts. I have left out the Subdivisions but have kept all the Principal Lines. The Cornices might, I think, be drawn by adding the Figures of each Architrave together, and disposing them as they are Figur'd in the Cornices.

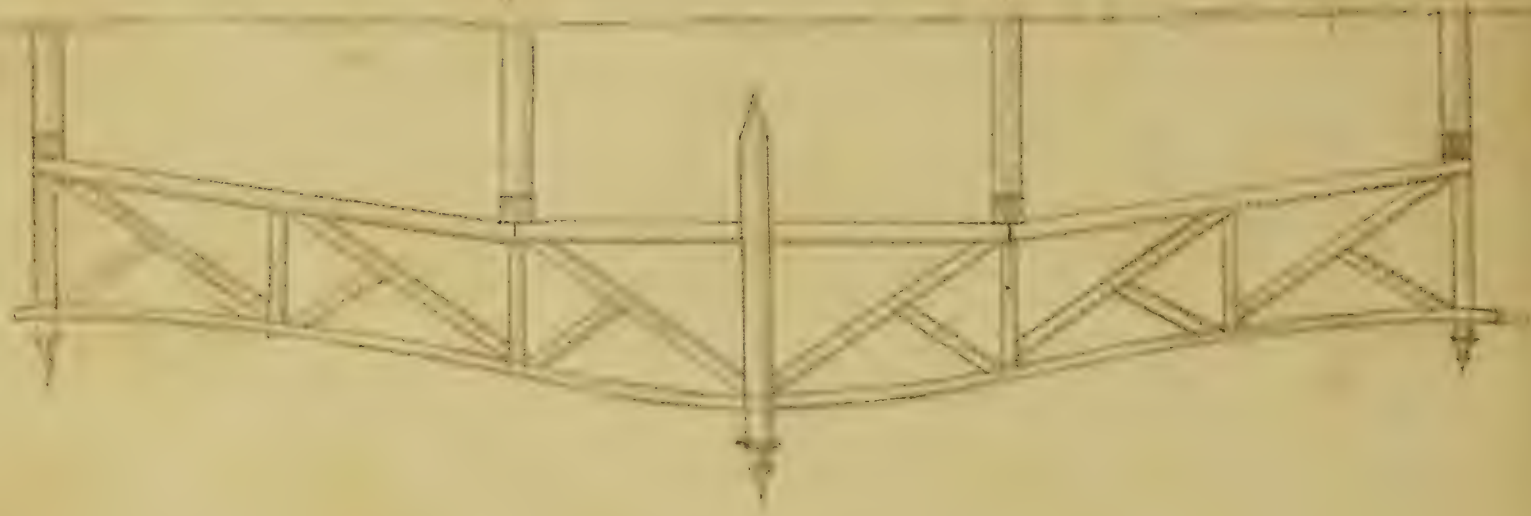
e other Cornices done in the same Manner as in the Last Plate.

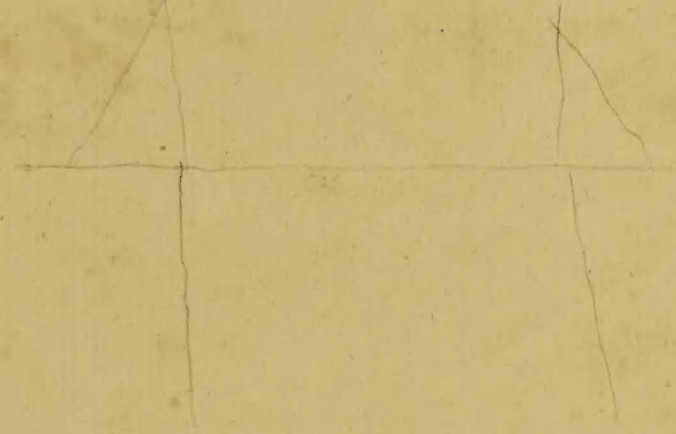
P. 55



87-13
Geology Stacks
QE 144
S3







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3612